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File Menu

The File Menu is the point of entry for all LandView databases, as well as for databases which are external to LandView (i.e., databases that are obtained or created by the user, and not part of the original LandView product.)

The File Menu also allows for the creation of new "xbase" files (files in the dBase/Foxpro format), for the modification of xbase file structures, and for printing databases.

See [Adding your own files to the "Other Files" menu](#) for a discussion of how you can modify the "File" and the "Other Files" menus.

When a database is chosen from the File Menu, data records are displayed in one of two ways: as a customized screen, or as a generalized "browse" screen. The LandView databases that have customized screens are: Census Data, Air Facilities, Hazardous Waste Facilities, Superfund Sites (NPL, Non-NPL, No Longer of Concern), Toxic Release Inventory Sites , Wastewater Discharge Sites , EPA Air Quality Monitoring Sites, Ozone Non-attainment Areas, and Watersheds.

Each customized screen has a Browse button to show the database records in the generalized browse mode.

LandView™ III Help

Census Data

1990 Census data in LandView III are organized by State, County, Congressional District, Place, Census Tract/Block Numbering Area, Census Block Group, Metropolitan Area (MA), Minor Civil Division (MCD), American Indian Reservation, and Alaska Native Region

Excepting congressional districts and metropolitan areas, all geographic political and statistical areas are based upon the 1990 Census of Population and Housing tabulation geography. The congressional districts are for the 105th Congress (January 1997 through January 1999) and the metropolitan areas are defined as June 30, 1996. The 1990 Census data was re-tabulated to conform to the new congressional districts and metropolitan areas.

The [Census Glossary](#) contains definitions of these geographic terms.

The boundary files for mapping of these entities are derived from the TIGER/Line 1995® files, and may be simplified from the original polygons and may not always exactly overlay the street pattern. See [Generalized Boundaries](#) for a discussion of this. The TIGER/Line 1995® files were produced from the TIGER database from late Summer 1995 to early Spring 1996. To maintain compatibility with the 1990 Census data presented in this product, official boundaries used in the 1990 Census data tabulations are shown in this product excepting congressional districts (105th) and Metropolitan Areas (June 30, 1996). With the exception of Hawaii and the Insular territories, both the TIGER/Line 1995® files and the boundary files are based upon the 1983 North American Datum (NAD 83).

These 1990 census data come from two sources. Summary Tape File 1A (STF1A) contains information collected on an 100 percent basis that are referred to as counts, while Summary Tape File 3A (STF3A) contains information collected on a sample basis that are referred to as estimates. Definitions of the terms used in these data (such as race, household, etc.) are found in the [STF3 Technical Documentation Appendix B Definitions of Subject Characteristics](#).

Both STF1A and STF3A data sets are subject to nonsampling errors while STF3A is subject to sampling errors. Further discussion of these issues are found in [STF3 Technical Documentation Appendix C Accuracy of the Data](#). Users are cautioned that differences may occur when comparing similar data between STF1A and STF3A because of sampling variability. A fuller discussion of this is provided in [STF3 USER NOTE 2 Clarification of Differences Between 100-Percent Counts and Sample Estimates](#).

The following field names, data types, field lengths, number of decimal places, and field descriptions are common to all levels, with the following exceptions: Data for territories (American Samoa, Guam, Northern Mariana Islands, Puerto Rico, Virgin Islands) is limited to PERSONS, FAMILIES, HOUSEHOLDS, all AGE fields, OWNER_OCC, RENTER_OCC, INCOME, AREALAND, AREAWAT, INTPTLAT, INTPTLNG. All other fields are represented in the databases with a -1, and show on the screen as NA (not applicable). Data for the Metropolitan Area level includes all fields except INCOME, HIGHMORT, HIGHRENT, PC_BACHDEG, PC_HIGHSCH, PC_URBAN, PC_RURAL, SAMEHOUSE, and MEDYRBUILT, and also have -1 in those database fields and show NA on the screen. There is no data in the Places database for American Samoa, Guam, and Northern Mariana Islands.

Calculated figures are rounded to the specified decimal place.

Count of Persons in Identified Area. Source: STF1A, P0010001

FAMILIES N 9

Count of Families in Identified Area. Source: STF1A, P0020001

HOUSEHOLDS N 9

Count of Households in Identified Area. Source: STF1A, P0030001

INCOME N 9

Median Household Income Estimate. Source: STF3A, P080A001

AGE_0_4 N 9

Count of Persons 4 years old and younger. Source: STF1A, P0110001 through P0110003

AGE_5_9 N 9

Count of Persons 5 to 9 years old. Source: STF1A, P0110004 through P0110006

AGE_10_19 N 9

Count of Persons 10 to 19 years old. Source: STF1A, P0110007 through P0110014

AGE_20_49 N 9

Count of Persons 20 to 49 years old. Source: STF1A, P0110015 through P0110022

AGE_50_64 N 9

Count of Persons 50 to 64 years old. Source: STF1A, P0110023 through P0110026

AGE_65_UP N 9

Count of Persons 65 years old and older. Source: STF1A, P0110027 through P0110031

WHITE N 9

Count of People Who Reported Race as White. Source: STF1A, P0060001

BLACK N 9

Count of People Who Reported Race as Black. Source: STF1A, P0060002

INDIAN N 9

Count of People Who Reported Race as American Indian, Eskimo, or Aleut. Source: STF1A, P0060003

ASIAN N 9

Count of People Who Reported Race as Asian or Pacific Islander. Source: STF1A, P0060004

OTHER N 9

Count of People Who Reported Race as Other. Source: STF1A, P0060005

HISPANIC N 9

Count of People Who Reported Ethnicity as Hispanic. Source: STF1A, P0080001

OWNER_OCC N 9

Count of Owner-Occupied Households. Source: STF1A, H0030001

RENTER_OCC N 9

Count of Renter-Occupied Households. Source: STF1A, H0030002

PC_0_4 N 5 1

Percentage of Persons 4 years old and younger. Source: calculated, $(AGE_0_4/PERSONS)*100$

PC_5_9 N 5 1

Percentage of Persons 5 to 9 years old. Source: calculated, $(AGE_5_9/PERSONS)*100$

PC_10_19 N 5 1

Percentage of Persons 10 to 19 years old. Source: calculated, $(AGE_10_19/PERSONS)*100$

PC_20_49 N 5 1

Percentage of Persons 20 to 49 years old. Source: calculated, $(AGE_2_49/PERSONS)*100$

PC_50_64 N 5 1

Percentage of Persons 50 to 64 years old. Source: calculated, $(AGE_50_64/PERSONS)*100$

PC_65_UP N 5 1

Percentage of Persons 65 years old and older. Source: calculated, $(AGE_65_UP/PERSONS)*100$

PC_WHITE N 5 1

Percentage of Persons Who Reported Race as White. Source: calculated, $(WHITE/PERSONS)*100$

PC_BLACK N 5 1

Percentage of Persons Who Reported Race as Black. Source: calculated, $(BLACK/PERSONS)*100$

PC_INDIAN N 5 1

Percentage of Persons Who Reported Race as American Indian, Eskimo, or Aleut. Source: calculated, $(INDIAN/PERSONS)*100$

PC_ASIAN N 5 1

Percentage of Persons Who Reported Race as Asian/Pacific Islander. Source: calculated, $(ASIAN/PERSONS)*100$

PC_OTHER N 5 1

Percentage of Persons Who Reported Race as Other. Source: calculated, $(OTHER/PERSONS)*100$

PC_HISPAN N 5 1

Percentage of Persons Who Reported Ethnicity as Hispanic. Source: calculated, $(HISPAN/PERSONS)*100$

PC_OWNER N 5 1

Percentage Owner-Occupied Households. Source: calculated, $(OWNER_OCC/HOUSEHOLDS)*100$

PC_RENTER N 5 1

Percentage Renter-Occupied Households. Source: calculated, $(RENTER_OCC/HOUSEHOLDS)*100$

AREALAND N 11 1

Land Area of Identified Area. Source: STF1A, AREALAND, converted from sq. km. to sq. mi.

AREAWAT N 11 1

Water Area of Identified Area. Source: STF1A, AREAWAT, converted from sq. km. to sq. mi.

INTPTLAT C 9

Internal Point Latitude (Similar to Centroid) in degrees to six decimal places (decimal point is implied). First digit identifies the hemisphere. A plus sign (+) indicates Northern Hemisphere; a minus sign (-) indicates Southern Hemisphere. Source: STF1A, INTPLAT

INTPTLNG C 10

Internal Point Longitude (Similar to Centroid) in degrees to six decimal places (decimal point is implied). First digit identifies the hemisphere. A plus sign (+) indicates Eastern Hemisphere; a minus sign (-) indicates Western Hemisphere. A point on the 180th meridian is assigned to the Western Hemisphere (-180000000). Source: STF1A, INTPLNG

MINORITY N 9

Count of persons of non-White races, plus White persons of Hispanic Origin. Source: STF1A, P0010001 - P0060001 + P0100006

POVERTY N 9

Estimate of persons for whom poverty status is determined living below the poverty level. Source: STF3A, P1170013 + P1170014 + P1170015 + P1170016 + P1170017 + P1170018 + P1170019 + P1170020 + P1170021 + P1170022 + P1170023 + P1170024

PC_MINORIT N 5 1

Percentage of the total population who are either non-White, or White Hispanic. Source: STF1A, calculated, (MINORITY/PERSONS)*100

PC_POVERTY N 5 1

Estimated Percentage of persons for whom poverty status is determined living below the poverty level. Source: STF3A, calculated, (POVERTY/sum of P1170001 through P1170012+POVERTY)*100

PC_URBAN N 5 1

Estimated Percentage of all persons living in urban areas. Source: STF3A, calculated, $((P0060001 + P0060002) / P0010001) * 100$

PC_RURAL N 5 1

Estimated Percentage of all persons living in rural areas. Source: STF3A, calculated, $((P0060003 + P0060004) / P0010001) * 100$

SCH_ENROL N 5 1

Estimate of persons 3 years and older enrolled in elementary through high school. Source: STF3A, P0540003+P0540004

PC_HIGHSCH N 5 1

Estimated Percentage of persons 18 years and older that graduated from high school. Source: STF3A, $((P0600003+P0600004+P0600005+P0600006+P0600007) / (P0130013+P0130014+P0130015+P0130016+P0130017+P0130018+P0130019+P0130020+P0130021+P0130022+P0130023+P0130024+P0130025+P0130026+P0130027+P0130028+P0130029+P0130030+P0130031)) * 100$

PC_BACHDEG N 5 1

Estimated Percentage of persons 18 years and older that have bachelors degree. Source: STF3A, $((P0600006+P0600007)/(P0130013+P0130014+P0130015+P0130016+P0130017+P0130018+P0130019+P0130020+P0130021+P0130022+P0130023+P0130024+P0130025+P0130026+P0130027+P0130028+P0130029+P0130030+P0130031)) * 100$

SAMEHOUSE N 5 1

Percentage of population 5 years and older that lived in the same house in 1985. Source: STF3A, $(P0430001/(P0010001-P0130001+P0130002+P0130003)) * 100$

BUILT_1939 N 9

Estimate of Houses built in 1939 or earlier. Source: STF3A, H0250008

MEDYRBUILT N 4

Estimate of Median Year houses built. Source: STF3A, H025A001

HIGHMORTG N 5 1

Estimate of percentage of owner-occupied households where the shelter costs are 30% or more of the income. Source: STF3A, $((H0580004+H0580005+H0580010+H0580011)/(sum of H0580001 through H0580012)) * 100$

HIGHRENT N 5 1

Estimate of the percentage of renter-occupied households where the shelter costs are 30% or more of the income. Source: STF3A, $((H0510004+H0510005+H0510010+H0510011)/(\text{sum of } H0510001 \text{ through } H0510012))*100$

HOUS_UNITS N 9

Estimate of total housing units. Source: STF3A, H0010001

PERSONSTF3 N 9

Estimate of Persons from STF3A file. Source: STF3A, P0010001

TOT_INCOM2 N 13

Estimate of Aggregate Personal Income. Source: STF3A, sum of P1150001 through P1150005

PER CAPITA INCOME N 9

Estimate of Aggregate Personal Income divided by estimate of persons. Calculated field for screen display only. Source: STF3A, $TOT_INCOM2 / PERSONSTF3$

LandView™ III Help

Air Facilities

The Air Facilities data in LandView is extracted from the Aerometric Information Retrieval System (AIRS). Maintained by the Office of Air and Radiation, AIRS stores information on air quality, point source emissions, and area/mobile source data required by federal regulation from the 50 states. Monitoring is required for criteria pollutants (identified through the Clean Air Act) based on population, pollutant sources, geographical area, etc. Point sources emitting more than 100 tons per year of any criteria pollutant (except 5 tons per year for lead and 1000 tons per year for carbon monoxide) must report actual or estimated annual emissions data. Data in the system is available to the public through agency publications in NTIS. LandView III uses the symbol "A" when displaying air facilities.

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for file AIR_FACL.DBF are as follows:

STATE C 2
State Abbreviation

STATE_CODE C 2
State FIPS Code

ST_COUNTY C 5
State and County FIPS CODE

PLT_ID C 4
Facility ID for Air Program

PLT_CDS C 5
Cross-reference ID to Compliance Data System

PLT_NAME C 40
Facility Name

PLT_ADDR C 30
Facility Street Address

SIC C 4

Standard Industrial Classification Code

PLT_CITY C 30

City Where Facility is Located

PLT_ZIP C 5

Zip Code of Facility

LONG_DMS C 7

Longitude Reported by Facility (degrees/minutes/seconds)

LAT_DMS C 7

Latitude Reported by Facility (degrees/minutes/seconds)

YEAR C 2

Reporting Year Varies by Facility

CO N 8 2

Carbon Monoxide Emissions (Tons/Year)

NO2 N 8 2

Nitrogen Oxides Emissions (Tons/Year)

PM10 N 8 2

Particulate Matter Emissions (< 10 microns)

SO2 N 8 2

Sulfur Dioxides Emissions (Tons/Year)

VOC N 8 2

Volatile Organic Compound Emissions (Tons/Year)

PT N 8 2

Total Particulate Emissions (Tons/Year)

PB N 8 3

Lead Emissions (Tons/Year)

LATITUDE C 10

Latitude in decimal degrees

LONGITUDE C 11

Longitude in decimal degrees

LL_METHOD C 2

Latitude and Longitude collection method

LL_ACCURAC N 7 1

Accuracy in meters associated with the Latitude and Longitude collection method

LL_DESCRIP C 2

Description of the Latitude and Longitude collection point

See [Latitude & Longitude Collection Methods](#) for a description of the lat/long collection fields.

LandView™ III Help
Hazardous Waste Facilities

Hazardous Waste facility information in LandView comes from the Biennial Reporting System (BRS). The BRS system contains information from reports submitted to States and EPA Regional Offices every other year by facilities regulated under the Resource Conservation and Recovery Act (RCRA). Data have been submitted biennially since 1985. EPA's Office of Solid Waste and Emergency Response is responsible for the system. BRS data in LandView III are from the 1993 reporting year and represent treatment, storage and disposal (TSD) facilities and major generators of hazardous waste. Major generators are defined as facilities generating over 100 kg of hazardous waste in any calendar month. EPA provides this information to the public in a summary of the biennial reports. The information in this system is represented in LandView III by the symbol "H" for hazardous waste.

There are three databases for the BRS data. BRS_1.DBF contains the basic facility description; BRS_2.DBF contains a list of waste systems managed at each facility; and BRS_3.DBF is a table of waste system codes and descriptions.

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for file BRS_1.DBF are as follows:

EPA_ID C 12
EPA ID NUMBER

NAME C 40
NAME

LQG_FLAG C 3
LARGE QUANTITY GENERATOR FLAG

TONS_GEN N 13 3
TOTAL TONS GENERATED

TSD_FLAG C 3
TREAT/STOREAGE/DISPOSAL FLAG

TONS_MGMT N 13 3
TOTAL TONS MANAGED

ADDRESS1 C 30
ADDRESS LINE 1

ADDRESS2 C 30
ADDRESS LINE 2

CITY C 25
CITY

STATE C 2
STATE ABBREVIATION

ZIP C 9
ZIP CODE

CONTACT_FN C 14
CONTACT FIRST NAME

CONTACT_LN C 15
CONTACT LAST NAME

CONTACT_TI C 15
CONTACT TITLE

CONTACT_PH C 10
CONTACT PHONE

CONTACT_EX C 4
CONTACT EXTENSION

YEAR C 4
YEAR

LAT_DMS C 7
LATITUDE, degrees, minutes, seconds

LONG_DMS C 8
LONGITUDE, degrees, minutes, seconds

ST_COUNTY C 5
FIPS STATE_COUNTY CODE

LATITUDE C 10
LATITUDE, decimal degrees

LONGITUDE C 11

LONGITUDE, decimal degrees

LL_METHOD C 2

Latitude and Longitude collection method

LL_ACCURAC N 7 1

Accuracy in meters associated with the Latitude and Longitude collection method

LL_DESCRIP C 2

Description of the Latitude and Longitude collection point

See [Latitude & Longitude Collection Methods](#) for a description of the lat/long collection fields.

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for file BRS_2.DBF are as follows:

EPA_ID C 12
EPA ID NUMBER

SYSTEM C 4
SYSTEM CODE

TONS_MGMT N 13 3
TOTAL TONS MANAGED

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for file BRS_3.DBF are as follows:

SYSTEM C 4
SYSTEM CODE

DESCRIPT C 60
DESCRIPT

LandView™ III Help

Superfund Sites

Maintained by EPA's Office of Solid Waste and Emergency Response, CERCLIS supports EPA management and oversight of the Superfund program. The data system has two purposes: (1) to maintain an automated inventory of abandoned, inactive, or uncontrolled hazardous waste sites; and (2) to report the status of major stages of site clean-up. CERCLIS provides a decentralized national system whereby each region controls and enters its respective data on regional systems and transfer that information to the central database maintained at the National Computer Center in Research Triangle Park, NC. CERCLIS includes National Priority Listed Sites (NPL), shown in LandView III with the symbol "S" for Superfund, non-NPL sites, shown with the "C" symbol for CERCLIS, and archived sites (those sites that were formerly in CERCLIS, but are now deemed inappropriate to be in the database) with the symbol "C" surrounded by a circle.

The file names for the three Superfund files are:

CERCNPL.DBF for NPL sites,
CERCNNPL.DBF for non-NPL sites,
CERCNFA.DBF for archived sites.

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for the all three files are as follows:

COUNTY C 25
County Name

NAME C 40
NAME

STATE C 2
STATE ABBRIEVIATION

C0001 C 2
EPA Region

C0101 C 12
EPA ID Number

C0110 C 40
Address

C0111 C 18
City

C0112 C 5
Zip Code

C0121 C 3
County FIPS Code

C0130 C 2
Congressional District

C0135 C 1
Federal Facility (Y/N)

FED C 22
Federal Facility (Text)

C0137 C 1
Site Incident Category

SITE_CAT C 26
Type of Site

C0204 C 20
On-site Coordinator Name

C0205 C 10
Contact Phone Number

C0305 C 1
NPL Status

NPL C 26
NPL Status Text

C0322 C 7
Latitude, degrees, minutes, seconds

C0323 C 8
Longitude, degrees, minutes, seconds

C0326 C 1
Lat/Long Source

C0327 C 1
Lat/Long Accuracy

C0364 C 8
USGS Hydrologic Unit Code

YEAR C 4
YEAR

ST_COUNTY C 5
FIPS STATE_COUNTY CODE

LATITUDE C 10
LATITUDE, decimal degrees

LONGITUDE C 11
LONGITUDE, decimal degrees

LL_METHOD C 2

Latitude and Longitude collection method

LL_ACCURAC N 7 1

Accuracy in meters associated with the Latitude and Longitude collection method

LL_DESCRIP C 2

Description of the Latitude and Longitude collection point

See [Latitude & Longitude Collection Methods](#) for a description of the lat/long collection fields.

LandView™ III Help

About LandView

LandView™ III is a CD-ROM publication that provides database extracts from the Environmental Protection Agency, the Bureau of Census, and other federal agencies. These databases are presented in a geographic context on maps that contain jurisdictional entities (states, counties, cities & towns, zip codes, congressional districts, and others), detailed network of roads, rivers, and railroads, census block group and tract polygons, schools, hospitals, churches, cemeteries, airports, dams, and other landmark features.

The LandView system consists of two software programs: the LandView database system and the **MARPLOT** mapping system. These two systems communicate with each other to allow you to make map inquiries based on a selection of database records, and to make database inquiries based on a selection of map objects.

History of LandView

LandView has its roots in the CAMEO system (Computer-Aided Management of Emergency Operations). CAMEO was developed by the Environmental Protection Agency and the National Oceanic and Atmospheric Administration to facilitate the implementation of the Emergency Planning and Community Right-to-Know Act, a far-reaching law requiring communities to develop emergency response plans addressing chemical hazards and making available to the public information on chemical hazards in the community.

CAMEO DOS, first released in 1991, contained a mapping program called MARPLOT, which provided access to computerized street maps based on the Bureau of Census' TIGER/Line files. MARPLOT was subsequently enhanced to include Census boundaries and demographic statistics, and was included in the TIGER/Line 1992 CD-ROM product, under the name of LandView.

With the addition of EPA-regulated sites and more detailed demographic data, LandView became a CD-ROM product in itself, released in 1995 as LandView II. Being a DOS-based program, LandView II was limited by the DOS memory restrictions, and was difficult to run in memory-intensive environments, such as local-area networks. To solve that problem, and to provide additional capabilities and ease of use, the LandView software was converted to the Windows platform. Two programs were developed, MARPLOT for Windows (the mapping engine), and LandView (the database search and query engine). Both programs have also been converted to run on the Macintosh platform. This Windows/Macintosh cross-platform system, with the inclusion of updated Census and EPA data, and data from several other federal agencies, is being released on CD-ROM as LandView III.

Programming for LandView III was provided by Peter Gattuso of the Environmental Protection Agency. Programming for **MARPLOT** was provided by Michael Katz and Jerry Muhasky of the National Oceanic and Atmospheric Administration.

LandView™ III Help
Toxic Release Inventory Sites

Maintained by EPA's Office of Prevention, Pesticides, and Toxic Substances, the Toxic Release Inventory System (TRI) contains data submitted to EPA by regulated facilities concerning chemicals and chemical categories listed by the Agency under Section 313 of the Emergency Planning and Community Right-to-Know Act. Data contained in the system include chemicals present, amount of on-site use, releases and off-site transfers (including Publicly-Owned Treatment Works, POTW), on-site treatment and minimization/prevention actions. Public access is provided to all publicly available data in the system through the National Library of Medicine through TOXNET. This information in LandView is represented by the symbol "T" for toxic chemical facility.

For more information see the [Official EPA Metadata for TRI](#).

There are three databases for the TRI data. TRI_1.DBF contains the basic facility description; TRI_2.DBF contains a list of chemicals released at each facility; and TRI_3.DBF is a table of chemical codes and descriptions.

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for file TRI_1.DBF are as follows:

TRI C 15
TRI ID NUMBER

NAME C 30
NAME

ADDRESS C 30
Site Address

CITY C 20
CITY

STATE C 2
STATE ABBRIEVIATION

ZIP C 5
ZIP CODE

ZIP4 C 4
ZIP4

EPA_ID C 12
EPA ID NUMBER

YEAR C 4
YEAR

ST_COUNTY C 5
FIPS STATE_COUNTY CODE

SIC C 4
SIC CODE

PHONE C 10
Phone

LATITUDE C 10
LATITUDE

LONGITUDE C 11
LONGITUDE

ALT_ID C 5
LV ALTERNATE ID

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for file TRI_2.DBF are as follows:

TRI C 15
TRI ID NUMBER

TRICHM_ID C 9
TRI CHEMICAL ID NUMBER

FUGAIR_LBY N 10
FUGITIVE AIR RELEASES

STKAIR_LBY N 10
STACK AIR RELEASES

WATER_LBY N 10
WATER RELEASES

UNDINJ_LBY	N	10
UNDERGR. INJECTION. REL.		

LAND_LBY	N	10
LAND RELEASES		

POTWX_LBY	N	10
POTW TRANSFERS		

OTHER_LBY	N	10
OTHER RELEASES		

LL_METHOD	C	2
Latitude and Longitude collection method		

LL_ACCURAC	N	7	1
Accuracy in meters associated with the Latitude and Longitude collection method			

LL_DESCRIP	C	2
Description of the Latitude and Longitude collection point		

See [Latitude & Longitude Collection Methods](#) for a description of the lat/long collection fields.

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for file TRI_3.DBF are as follows:

TRICHM_ID	C	9
TRI CHEMICAL ID NUMBER		

CHEMICAL	C	30
CHEMICAL		

LandView™ III Help
Wastewater Discharge Sites

The Permit Compliance System (PCS) system is a computerized management information system for EPA and State use in tracking permit, compliance, and enforcement status for the National Pollutant Discharge Elimination System (NPDES) program under the Clean Water Act. PCS contains information on permits for discharging wastewater from industries and municipal treatment plants throughout the nation. The EPA's Office of Enforcement and Compliance Assurance is responsible for the operation and maintenance of PCS. EPA Regional Offices and State users of the system are responsible for the entry and quality of the data in the system. This information is represented in LandView by the symbol "W" for waste water discharger.

Note concerning the accuracy of PCS data:

EPA has determined that there are inaccuracies in the wastewater loadings (quantities discharged) reported in PCS in approximately 15% of major facilities. This is because of inaccuracies in labelling of effluent pipes and in identification of effluent monitoring locations. EPA is working to improve reporting accuracy and will issue guidance on this subject. Until this guidance is released and the data modified to comply with it, wastewater loadings from the PCS should be used with caution.

There are three databases for the PCS data. PCS_1.DBF contains the basic facility description; PCS_2.DBF contains a list of parameters released at each facility; and PCS_3.DBF is a table of parameter codes and descriptions.

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for file PCS_1.DBF are as follows:

NPID	C	9
NPDES ID Number		

SIC	C	4
SIC CODE		

NAME	C	40
NAME		

ADDRESS	C	25
Site Address		

CITY	C	25
CITY		

STATE	C	2
STATE ABBRIEVIATION		

ZIP C 9
ZIP CODE

EPA_ID C 12
EPA ID NUMBER

ST_COUNTY C 5
FIPS STATE_COUNTY CODE

YEAR C 4
YEAR

PHONE C 10
Phone

MAJOR C 1

Major Facility Indicator (M or blank)

Major facilities have a design or actual flow of one million gallons per day (MGD) or greater, a service population of 10,000 or greater, or a significant impact on water quality (i.e., with a potential for toxic discharge, located close to a drinking water intake, discharging into stressed receiving waters, or requiring advanced treatment). Approximately 10 percent of all NPDES permits are issued to major facilities.

LATITUDE C 10
LATITUDE

LONGITUDE C 11
LONGITUDE

LL_METHOD C 2

Latitude and Longitude collection method

LL_ACCURAC N 7 1

Accuracy in meters associated with the Latitude and Longitude collection method

LL_DESCRIP C 2

Description of the Latitude and Longitude collection point

See [Latitude & Longitude Collection Methods](#) for a description of the lat/long collection fields.

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for file PCS_2.DBF are as follows:

NPID	C	9
NPDES ID Number		

PARAM	C	5
Parameter Code		

AMOUNT	N	13	3
Amount Discharged			

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for file PCS_3.DBF are as follows:

PARAM	C	5
Parameter Code		

PARAM_DESC	C	40
Parameter Description		

UNIT_FLAG	C	1
Unit Flag		

values are:

blank	= pounds per year (lbs/yr)
1 or 2	= gallons per year (gal)
3	= million gallons per year (m.gal)
4	= cubic meters per year (m3)

LandView™ III Help

Other Files

The original LandView II CD-ROM publication contained Census databases and 5 EPA databases. These databases are the primary items in the [File Menu](#). LandView III has added additional databases from both EPA and other federal agencies, which are accessible from the "Other Files" menu option.

The "Other Files" sub-menu may be customized to add additional user-supplied files. See [Adding your own files to the "Other Files" menu](#).

The databases currently available from this sub-menu are as follows:

[EPA Air Quality Monitoring Sites](#)

[Watersheds](#)

[Ozone Non-attainment Areas](#)

[Dams](#)

[Airports](#)

[Nuclear Sites](#)

[U.S. Highways, Railroads, and Water](#)

[Canadian Places](#)

[Mexican Places](#)

[Schools](#)

[Hospitals](#)

[Churches](#)

[Cemeteries](#)

[Zip Codes](#)

[Brownfields Pilots](#)

LandView™ III Help
EPA Air Quality Monitoring Sites

The Air Quality Monitoring data in LandView is extracted from the Aerometric Information Retrieval System (AIRS). Maintained by the Office of Air and Radiation, AIRS stores information on air quality, point source emissions, and area/mobile source data required by federal regulation from the 50 states. Monitoring is required for criteria pollutants (identified through the Clean Air Act) based on population, pollutant sources, geographical area, etc. Data in the system is available to the public through agency publications in NTIS. LandView III uses the symbol "Q" when displaying Air Quality Monitoring sites.

The fields containing "# or exceptions" refer to the number of observations that were in violation of standards.

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for file AIR_QUAL.DBF are as follows:

ADDRESS C 40
Site Address

STATE C 2
STATE ABBRIEVIATION

SITE_ID C 9
Site ID

YEAR1 C 2
Year 1

YEAR2 C 2
Year 2

YEAR3 C 2
Year 3

YEAR4 C 2
Year 4

CO_YR1EXC N 5
Carbon Monoxide Yr 1, # of exceptions

CO_YR1MAX N 8 3
Carbon Monoxide Yr 1, max

CO_YR1OBS N 5
Carbon Monoxide Yr 1, # observations

CO_YR2EXC N 5
Carbon Monoxide Yr 2, # of exceptions

CO_YR2MAX N 8 3
Carbon Monoxide Yr 2, max

CO_YR2OBS N 5
Carbon Monoxide Yr 2, # observations

CO_YR3EXC N 5
Carbon Monoxide Yr 3, # of exceptions

CO_YR3MAX N 8 3
Carbon Monoxide Yr 3, max

CO_YR3OBS N 5
Carbon Monoxide Yr 3, # observations

CO_YR4EXC N 5
Carbon Monoxide Yr 4, # of exceptions

CO_YR4MAX N 8 3
Carbon Monoxide Yr 4, max

CO_YR4OBS N 5
Carbon Monoxide Yr 4, # observations

NO2_YR1EXC N 5
Nitrogen Dioxide Yr 1, # of exceptions

NO2_YR1MAX N 8 3
Nitrogen Dioxide Yr 1, max

NO2_YR1OBS N 5
Nitrogen Dioxide Yr 1, # observations

NO2_YR2EXC N 5
Nitrogen Dioxide Yr 2, # of exceptions

NO2_YR2MAX N 8 3
Nitrogen Dioxide Yr 2, max

NO2_YR2OBS N 5
Nitrogen Dioxide Yr 2, # observations

NO2_YR3EXC N 5
Nitrogen Dioxide Yr 3, # of exceptions

NO2_YR3MAX N 8 3
Nitrogen Dioxide Yr 3, max

NO2_YR3OBS N 5
Nitrogen Dioxide Yr 3, # observations

NO2_YR4EXC N 5
Nitrogen Dioxide Yr 4, # of exceptions

NO2_YR4MAX N 8 3
Nitrogen Dioxide Yr 4, max

NO2_YR4OBS N 5
Nitrogen Dioxide Yr 4, # observations

O3_YR1EXC N 5
Ozone Yr 1, # of exceptions

O3_YR1MAX N 8 3
Ozone Yr 1, max

O3_YR1OBS N 5
Ozone Yr 1, # observations

O3_YR2EXC N 5
Ozone Yr 2, # of exceptions

O3_YR2MAX N 8 3
Ozone Yr 2, max

O3_YR2OBS	N	5	
Ozone Yr 2, # observations			
O3_YR3EXC	N	5	
Ozone Yr 3, # of exceptions			
O3_YR3MAX	N	8	3
Ozone Yr 3, max			
O3_YR3OBS	N	5	
Ozone Yr 3, # observations			
O3_YR4EXC	N	5	
Ozone Yr 4, # of exceptions			
O3_YR4MAX	N	8	3
Ozone Yr 4, max			
O3_YR4OBS	N	5	
Ozone Yr 4, # observations			
PB_YR1EXC	N	5	
Lead Yr 1, # of exceptions			
PB_YR1MAX	N	8	3
Lead Yr 1, max			
PB_YR1OBS	N	5	
Lead Yr 1, # observations			
PB_YR2EXC	N	5	
Lead Yr 2, # of exceptions			
PB_YR2MAX	N	8	3
Lead Yr 2, max			
PB_YR2OBS	N	5	
Lead Yr 2, # observations			

PB_YR3EXC	N	5	
Lead Yr 3, # of exceptions			
PB_YR3MAX	N	8	3
Lead Yr 3, max			
PB_YR3OBS	N	5	
Lead Yr 3, # observations			
PB_YR4EXC	N	5	
Lead Yr 4, # of exceptions			
PB_YR4MAX	N	8	3
Lead Yr 4, max			
PB_YR4OBS	N	5	
Lead Yr 4, # observations			
PM_YR1EXC	N	5	
Particulate Matter Yr 1, # of exceptions			
PM_YR1MAX	N	8	3
Particulate Matter Yr 1, max			
PM_YR1OBS	N	5	
Particulate Matter Yr 1, # observations			
PM_YR2EXC	N	5	
Particulate Matter Yr 2, # of exceptions			
PM_YR2MAX	N	8	3
Particulate Matter Yr 2, max			
PM_YR2OBS	N	5	
Particulate Matter Yr 2, # observations			
PM_YR3EXC	N	5	
Particulate Matter Yr 3, # of exceptions			
PM_YR3MAX	N	8	3
Particulate Matter Yr 3, max			

PM_YR3OBS N 5
Particulate Matter Yr 3, # observations

PM_YR4EXC N 5
Particulate Matter Yr 4, # of exceptions

PM_YR4MAX N 8 3
Particulate Matter Yr 4, max

PM_YR4OBS N 5
Particulate Matter Yr 4, # observations

SO2_YR1EXC N 5
Sulfur Dioxide Yr 1, # of exceptions

SO2_YR1MAX N 8 3
Sulfur Dioxide Yr 1, max

SO2_YR1OBS N 5
Sulfur Dioxide Yr 1, # observations

SO2_YR2EXC N 5
Sulfur Dioxide Yr 2, # of exceptions

SO2_YR2MAX N 8 3
Sulfur Dioxide Yr 2, max

SO2_YR2OBS N 5
Sulfur Dioxide Yr 2, # observations

SO2_YR3EXC N 5
Sulfur Dioxide Yr 3, # of exceptions

SO2_YR3MAX N 8 3
Sulfur Dioxide Yr 3, max

SO2_YR3OBS N 5
Sulfur Dioxide Yr 3, # observations

SO2_YR4EXC	N	5	
Sulfur Dioxide Yr 4, # of exceptions			
SO2_YR4MAX	N	8	3
Sulfur Dioxide Yr 4, max			
SO2_YR4OBS	N	5	
Sulfur Dioxide Yr 4, # observations			
TSP_YR1EXC	N	5	
Total Particulate Suspended Matter Yr 1, # of exceptions			
TSP_YR1MAX	N	8	3
Total Particulate Suspended Matter Yr 1, max			
TSP_YR1OBS	N	5	
Total Particulate Suspended Matter Yr 1, # observations			
TSP_YR2EXC	N	5	
Total Particulate Suspended Matter Yr 2, # of exceptions			
TSP_YR2MAX	N	8	3
Total Particulate Suspended Matter Yr 2, max			
TSP_YR2OBS	N	5	
Total Particulate Suspended Matter Yr 2, # observations			
TSP_YR3EXC	N	5	
Total Particulate Suspended Matter Yr 3, # of exceptions			
TSP_YR3MAX	N	8	3
Total Particulate Suspended Matter Yr 3, max			
TSP_YR3OBS	N	5	
Total Particulate Suspended Matter Yr 3, # observations			
TSP_YR4EXC	N	5	
Total Particulate Suspended Matter Yr 4, # of exceptions			
TSP_YR4MAX	N	8	3
Total Particulate Suspended Matter Yr 4, max			

TSP_YR4OBS N 5
Total Particulate Suspended Matter Yr 4, # observations

ST_COUNTY C 5
FIPS STATE_COUNTY CODE

LAT_DMS C 6
LATITUDE, in degrees, minutes, seconds

LONG_DMS C 7
LONGITUDE, in degrees, minutes, seconds

LATITUDE C 10
LATITUDE

LONGITUDE C 11
LONGITUDE

IDMARPLOT C 16
MARPLOT ID Number

LandView™ III Help
Index of Watershed Indicators

LandView III contains over 2000 watershed boundaries, and an EPA database from the Index of Watershed Indicators (IWI). More detailed information about IWI can be obtained from the internet site "Surf Your Watershed" at <http://www.epa.gov/surf>

The goals of IWI are fourfold:

- 1) to characterize broadly the condition of the watersheds (defined as 8-digit Cataloging Units) in our country
- 2) to stimulate and empower citizens who will now have easy access to this aggregated information
- 3) to provide a baseline for dialogue among water managers at all geographic scales
- 4) to help measure progress toward our national goal of healthy watersheds

It is also important to note what IWI is not:

It is not the detailed site-specific information upon which to base individual actions such as establishing single permit limits.

It is not the only or the final word on watershed assessment; there are additional and more localized detailed data layers from State, Tribe, local, and other sources that watershed managers will want to use to design watershed-specific action plans. Many of these will be available over time on the Internet Program "Surf Your Watershed" at <http://www.epa.gov/surf>

It is not a template for a detailed watershed monitoring plan; however, this should be undertaken as a followup step to the IWI overall characterization. Guidelines for a comprehensive monitoring plan have been designed by EPA, States, and the Intergovernmental Task Force on Water Quality Monitoring, and are available from the Monitoring Branch, 202 260-7040, or at EMAIL from Buie.Lynda@epamail.epa.gov.

The national data used in IWI are of varying quality, as noted in the Data Layer Fact Sheets. Data become better as they are used, and subsequent phases of IWI will concentrate on improving the data, and adding important data layers that are missing.

The primary database containing watershed information is HYDRO_3.DBF. The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions are as follows:

CAT_UNIT	C	8
Cataloging Unit Code		

CAT_DESCR	C	40
Watershed Name		

DESIG_USE	N	2
-----------	---	---

Meeting Designated Uses

FISH_ADV N 2
Fish Consumption Advisories

DRNK_IMPCT N 2
Source Water Quality

CONT_SED N 2
Contaminated Sediments

WQ_TOXIC N 2
Water Quality Toxic Pollutants

WQ_CONV N 2
Water Quality Conventional Pollutants

WTLD_LOSS N 2
Wetland Loss Index

AQU_SPC_RS N 2
Aquatic Species at Risk

DISCH_TOXI N 2
High Toxic Discharges

DISCH_CONV N 2
High Conven. Discharges

URBAN_IMPC N 2
Urban Runoff Potential

AG_IMPCT N 2
Agricultural Runoff Impact

POP_CHNG N 2
Population Change

HYDRO_MOD N 2
Hydrologic Modif. by dams

ESTUARINE_ N 2
Pollution Susceptibility

CATEGORY N 2
Watershed Assesment

COND N 2
Watershed Condition

VULN N 2
Watershed Vulnerability

The cataloging unit name (or watershed name) can be described first by the sub_region (first 4 chacters of the cataloging unit code), and by the accounting unit (first 6 chacters of the cataloging unit code). Sub-region names are in the file HYDRO_1.DBF, and accounting unit names are in HYDRO_2.DBF.

A detailed description of the data elements from the HYDRO_3.DBF is as follows:

Meeting Designated Uses Set in State/Tribal Water
Quality Standards -

States and Tribes adopt water quality standards that include designated uses and both narrative and numeric standards to protect those uses. States and Tribes assess and report the quality of their waters against these benchmarks through their 305(b) Reports.

Data Values:
0 - between 80 and 100 percent of the waterbodies that are assessed in a watershed are supporting all designated uses; Designated use support indicates better water quality in the watershed.

6 - between 50 and 79 percent of the waterbodies that are assessed in a watershed are supporting all designated uses; Designated use support indicates less serious water quality problems in the watershed.

12 - between 20 and 49 percent of the waterbodies that are assessed in a watershed are supporting all designated uses; and Designated use support indicates more serious water quality problems in the watershed .

18 - fewer than 20 percent of the waterbodies that are assessed in a watershed are supporting all designated uses. Designated use support attainment indicates most serious water quality problems in the watershed.

Fish Consumption Advisories -

Fish accumulate both metals and synthetic organic pollutants that can pose health risks to humans consuming them. For this reason, many States issue fish consumption advisories that restrict consumption (generally these are restrictions on the number of meals over a period of time or the fish weight consumed over a period of time.) In some areas severe pollution results in advisories that recommend no consumption of fish. During 1995, 10 States issued statewide advisories pertaining to certain types of waterbodies. Under these advisories, all waterbody types (e.g., lakes) in all watersheds are typically included, even if no monitoring had taken place.

Data Values:

0 - It is affirmatively determined that fish contamination has been assessed in the watershed and that fish consumption advisories do not exist in the watershed, and this fact is reported in EPA's National Fish and Wildlife Advisory Database. Note: No data is currently available to support a score of zero. No active advisories exist in the watershed. Indicates fish are safe to eat in the watershed.

1 - A "restricted" consumption advisory exists in the watershed (i.e. a limit on the number of meals per month or per year). Advisory(s) active in watershed recommending limits on fish consumption

2 - "No consumption" advisory exists in the watershed (i.e. a complete ban on fish consumption, either of a single species or of multiple species). Advisory(s) active in watershed recommending no consumption of fish.

Source Water Quality Indicators -- Community Water Systems -

The availability of clean and safe drinking water sources for use by public water systems is a good indicator of the watershed's condition. Data to characterize the quality of these source waters is not available nationally. But surrogate measures using the existing Public Water Systems inventory (community water systems are a subset of public water systems) and compliance information can provide a partial picture of impaired source waters that prompt community water systems to add additional treatment or take other actions. Public water systems are required to take whatever actions are

necessary to ensure the drinking water they provide to consumers is of high quality and meets all State and EPA drinking water standards. Source waters that are impaired or threatened prompt water systems to take corrective actions, some of which can be captured by existing data reported to EPA. Public drinking water systems provide drinking water that meets EPA and State drinking water standards using available surface and subsurface water supplies. The quality and consistency of source water determines the treatment levels needed. Indicators of watersheds with conditions that treatment systems needs to overcome include: 1) populations served by systems that are in violation of national health-based drinking water standards during 1995 for contaminants that are source-related (i.e. inorganic chemicals, volatile organic chemicals, synthetic organics, and radio-nuclides); 2) have treatment in place beyond conventional treatment to address source water quality problems; or 3) use surface water sources that are unfiltered and are in violation of the Surface Water Treatment Rule.

Data Values:

0 - Less than 10 percent of the population served by community water systems (i.e. CWS) are served by CWS meeting at least one of the three criteria: (1) have health-based violations in the last year for contaminants that are source water-related; or (2) have drinking water treatment in place that is beyond conventional treatment and associated with response to a source water problem; or (3) use unfiltered surface water sources in violation of the Surface Water Treatment Rule. No indication of significant Source Water impairment in watershed

1 - Between 10 and 50 percent of the population served by CWS is served by CWS meeting at least one of the three criteria listed above. Source water impairment affecting actions or drinking water quality provided by community water systems in the watershed.

2 - Over 50 percent of the population served by CWS is served by CWS meeting at least one of the three criteria listed above. Source water impairment causing significant action by the community water systems in the watershed. Because there are three separate measures combined in this index, these scores are doubled when the CWS meet two of the three criteria and tripled when the CWS meet all three of the criteria. In the future,

individual maps will be produced for each measure and each measure will be scored independently to avoid any confusion.

Contaminated Sediments -

Sediment chemistry, sediment toxicity, and fish tissue residue data from sampling stations indicate the degree of sediment contamination and the probability of risk to human health and the environment. Watersheds with a large proportion of stations indicating potential risk, and with many stations indicating a higher probability of risk, are in a condition that warrants concern

Data Values:

0 - Data do not indicate probability of adverse effects.

Sediment contamination data is inconclusive; low degree of concern.

1 - At least ten Tier 1 stations are in a watershed and at least 75 percent of all stations are in Tier 1 or Tier 2. Sediment contamination in the watershed indicates a moderate degree of concern.

2 - At least twenty Tier 1 stations are in a watershed and at least 75 percent of all stations are in Tier 1 or Tier 2. Sediment contamination in the watershed indicates a high degree of concern.

Ambient Water Quality Data - Four Toxic Pollutants

Ambient water quality data from the EPA STORage and RETrieval (STORET) data system showing percent exceedences over a 6 year period (1990 to 1996) of the following contaminants compared with national criteria levels: cadmium, copper, lead and mercury.

Data Values:

0 - the average of exceedences above a criteria level for a pollutant is 10 percent or less; STORET data for selected toxic pollutants indicates better water quality.

1 - the average of exceedences above a criteria level is between the 11 and 50 percent; and, STORET data for selected toxic pollutants indicates less serious water quality problems.

2 - the average of exceedences above a criteria level is 50 percent or greater. STORET data for

selected toxic pollutants indicates more serious water quality problems.

Ambient Water Quality Data - Four Conventional Pollutants

Ambient water quality data from STORET showing percent exceedences over a 6 year period (1990 to 1996) of the following contaminants compared with reference levels: ammonia, BOD, nitrogen, phosphorous, and suspended sediment.

Data Values:

0 - the average of exceedences above a reference level for a pollutant is 10 percent or less; STORET data for selected conventional pollutants indicates better water quality.

1 - the average of exceedences above a reference level is between the 11 and 50 percent STORET data for selected conventional pollutants indicates less serious water quality problems.

2 - the average of exceedences above a reference level is 50 percent or greater STORET data for selected conventional pollutants indicates more serious water quality problems

Wetland Loss Index -

Wetland loss is a measure of the diminished resource values a watershed is experiencing. This index reflects both recent loss rates and historic loss rates.

Data Values:

0 - There was no wetland loss between 1982 and 1992 and less than 30 percent wetland loss over the historic period; Wetland loss in this watershed has been relatively low, indicating better aquatic condition.

1 - There was between 0-4 percent wetland loss between 1982 and 1992 and less than 30 percent wetland loss over the historic period; OR, there was no wetland loss between 1982 and 1992 and between 30 and 70 percent wetland loss over the historic period; Wetland loss in this watershed has been moderate, indicating less serious water quality problems exist in the watershed.

2 - There was more than 4 percent wetland loss between 1982 and 1992 OR, there was 0 to 4 percent

wetland loss between 1982 and 1992 and more than 30 percent wetland loss over the historic period OR, there was more than 70 percent wetland loss over the historic period. Wetland loss in this watershed has been high, indicating more serious water quality problems exist in the watershed.

Aquatic/Wetland Species at Risk

Watershed with high occurrences of species at risk reflect one measure of their vulnerability.

Data Values:

0 - one species is at risk in the watershed Watershed is considered less vulnerable to the impact of future degradation on imperiled aquatic species.

1 - between 2 and 5 species at risk exist in the watershed Watershed is considered more vulnerable to the impact of future degradation on imperiled aquatic species.

2 - more than 5 species at risk exist in the watershed Watershed is considered most vulnerable to the impact of future degradation on imperiled aquatic species

Discharge Loads Above Permitted Discharge Limits - Toxic Pollutants -

Toxic pollutant loadings discharged annually in a watershed above the discharge limits allowed by the National Pollution Discharge Elimination System (NPDES) permits are a measure of pollutant stress in the watershed. Loads for toxic pollutants are combined into one total, and expressed as a percentage below or over total watershed permit limits.

Data Values:

0 - The total toxic pollutant loads discharged to the watershed in 1995 did not exceed permit limits. The amount of toxic pollutants discharged to waterbodies in the watershed in 1995 was capable of being safely assimilated.

1 - The total toxic pollutant loads discharged to the watershed in 1995 averaged between 0 and 20 percent above permit limits. The amount of toxic pollutants discharged to waterbodies presented moderate unplanned pollution loads to the watershed.

2 - The total toxic pollutant loads discharged to the watershed in 1995 averaged more than 20 percent above permit levels. The amount of toxic pollutants discharged to waterbodies presented major unplanned pollution loads to the watershed.

Discharge Loads Above Permitted Discharge Limits - Conventional Pollutants

Conventional pollutant loadings discharged annually in a watershed above the discharge limits allowed by NPDES permits in the watershed are a measure of pollutant stress in the watershed. Loads for conventional pollutants are combined into one total, and expressed as a percentage below or over total watershed permit limits.

Data Values:

0 - The total conventional pollutant loads discharged to the watershed in 1995 did not exceed permit limits. The amount of conventional pollutants discharged to waterbodies in the watershed in 1995 was capable of being safely assimilated.

1 - The total conventional pollutant loads discharged to the watershed in 1995 averaged between 0 and 40 percent above permit limits. The amount of conventional pollutants discharged to waterbodies presented moderate unplanned pollution loads to the watershed.

2 - The total conventional pollutant loads discharged to the watershed in 1995 averaged more than 40 percent above permit limits. The amount of conventional pollutants discharged to waterbodies presented major unplanned pollution loads to the watershed.

Urban Runoff Potential -

The potential for urban runoff impacts is estimated as a function of population density. Future refinements to this index will be based upon percent of imperviousness to be estimated using established relationships between imperviousness and housing density. Housing density is being aggregated from census block groups and assigned to cataloging units.

Data Values:

0 - Population density in the watershed is 0-50 people per square mile. Urban runoff potential is low - rainfall may be absorbed.

1 - Population density in the watershed is 51-300 people per square mile. Urban runoff potential is medium.

2 - Population density in the watershed is greater than 300 people per square mile. Urban runoff potential is high - rainfall will wash pollutants into streams.

Index of Agricultural Runoff Impact -

This data layer provides a perspective on the threat to the condition of the aquatic system from nonpoint source pollution from agricultural activities. The Index of Agricultural Runoff Potential is a composite index that consists of: 1) nitrogen runoff potential index; 2) sediment delivery to rivers and streams; and 3) a pesticide leaching and runoff index.

Data Values:

0 - the NPS Impact Composite for the watershed is in the lowest quartile of index values nationally. Potential for agricultural runoff is lowest in the country.

1 - NPS Impact Composite is in the second and third quartile. Potential for agricultural runoff is moderate.

2 - the NPS Impact Composite for the watershed is in the highest quartile of index values nationally. Potential for agricultural runoff is highest in the country.

Population Change

Population growth rate in each watershed is a surrogate for many stress-producing activities from urbanization.

Data Values:

0 - Population in the watershed remained the same or declined between 1980 and 1990. Vulnerability to future water quality problems from population pressures in the watershed is low.

1 - Population increased between 0-5 percent from 1980 to 1990. Vulnerability to future water quality problems from population pressures in the watershed is moderate.

2 - Population increased by greater than 5 percent from 1980 to 1990. Vulnerability to future water

quality problems from population pressures in the watershed is high.

Hydrologic Modification Caused By Dams

The index shows relative reservoir impoundment volume in watersheds. The process of impounding streams changes their characteristics and the reservoirs and lakes formed in the process are more subject to pollution stress.

Data Values:

0 - The watershed has no recorded dams, or, in watersheds with dams, the normal dam storage volume is in the lowest quartile of volumes values nationally.

Vulnerability to future water quality problems from hydromodification is low.

1 - In watersheds with dams, the normal dam storage volume is in the second and third quartiles of volumes values nationally. Vulnerability to future water quality problems from hydromodification is moderate.

2 - In watersheds with dams, the normal dam storage volume is in the highest quartile of volumes values nationally. Vulnerability to future water quality problems from hydromodification is high.

Estuarine Pollution Susceptibility Index

This data layer measures an estuary's susceptibility to pollution as defined by its relative ability to concentrate dissolved and particulate pollutants. This data layer applies only to coastal cataloging units.

Data Values:

0 - An estuary is estimated to have a low efficiency for retaining suspended particles; and when the predicted concentration of both nitrogen or phosphorus is low. Watershed has low susceptibility to estuarine pollution.

1 - An estuary is estimated to have a medium efficiency for retaining suspended particles; or when the predicted concentration of either nitrogen or phosphorus is medium and neither concentration is high. Watershed has a moderate susceptibility to estuarine pollution.

2 - An estuary is estimated to have a high

efficiency for retaining suspended particles; or when the predicted concentration of either nitrogen or phosphorus is high. Watershed has a high susceptibility to estuarine pollution.

Overall watershed assessment

Combines all watershed condition and watershed vulnerability factors.

Data Values:

1 - Watersheds with better water quality and lower vulnerability to stressors such as pollutant loadings.

2 - Watersheds with better water quality and higher vulnerability to stressors such as pollutant loadings.

3 - Watersheds with less serious water quality problems and lower vulnerability to stressors such as pollutant loadings.

4 - Watersheds with less serious water quality problems and higher vulnerability to stressors such as pollutant loadings.

5 - Watersheds with more serious water quality problems and lower vulnerability to stressors such as pollutant loadings.

6 - Watersheds with more serious water quality problems and higher vulnerability to stressors such as pollutant loadings.

7 - Watersheds for which insufficient data exists to make an assertion of condition or vulnerability.

Overall watershed condition

The sum of the data values of the 7 individual watershed condition categories: 1) Meeting designated uses, 2) fish consumption advisories, 3) source water quality indicators, 4) contaminated sediments, 5) Water Quality - toxic pollutants, 6) Water Quality - conventional pollutants, 7) wetland loss index.

Overall watershed vulnerability, or the sum of the data values of the 8 individual watershed vulnerability categories: 1) aquatic/wetland species at risk, 2) discharge loads above permitted limits (toxic pollutants), 3) discharge loads above permitted limits (conventional

pollutants), 4) urban runoff potential, 5) agricultural runoff impact, 6) population change, 7) hydrologic modification by dams, 8) estuarine pollution susceptibility index.

LandView™ III Help
Ozone Non-attainment Areas

This database indicates which U.S. counties have been in a nonattainment status for ozone. On November 6, 1991, most areas of the country were designated nonattainment or unclassifiable/attainment. These terms are defined as follows:

Nonattainment

any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.

Attainment

any area that meets the national primary or secondary ambient air quality standard for the pollutant.

Unclassifiable

any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.

Those areas designated nonattainment were also classified as follows:

(1) Extreme

Area has a design value of 0.280 ppm and above.

(2) Severe 17

Area has a design value of 0.190 up to 0.280 ppm and has 17 years to attain.

(3) Severe 15

Area has a design value of 0.180 up to 0.190 ppm and has 15 years to attain.

(4) Serious

Area has a design value of 0.160 up to 0.180 ppm.

(5) Moderate

Area has a design value of 0.138 up to 0.160 ppm.

(6) Marginal

Area has a design value of 0.121 up to 0.138 ppm.

(7) Submarginal

Kansas City was the only area classified submarginal, but it has been redesignated attainment. This category includes areas that violate the ozone standard and have a design value of less than 0.121 parts per million. This occurs when there is not a complete set of data so that the estimated design value is higher than the ozone standard exceedance rate of 1.0 per year even though the estimated design value is less than the level of the standard.

(8) Transitional

an area designated as an ozone nonattainment area as of the date of enactment of the Clean Air Act Amendments of 1990 and has not violated the national primary ambient air quality standard for ozone for the 36-month period commencing on January 1, 1987 and ending on December 31, 1989. Twelve areas were classified transitional in 1991. Section 185A. "Transitional Areas" lists the requirements for these areas.

(9) Incomplete (or No) Data

an area designated as an ozone nonattainment area as of the date of enactment of the Clean Air Act Amendments of 1990 and did not have sufficient data to determine if it is or is not meeting the ozone standard.

The nonattainment status indicates if the entire county, or only part of the county, is in nonattainment for ozone, or if the county has returned to attainment status. For more information on nonattainment areas, see the EPA web site, www.epa.gov, and search for "nonattainment". Or, contact:

Ozone Policy & Strategies Group

Air Quality Strategies and Standards Division
Office of Air Quality Planning and Standards
Environmental Protection Agency
Research Triangle Park, NC 27711

The database containing nonattainment information is N_ATTAIN.DBF. The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions are as follows:

STATE_CODE C 2

State FIPS Code

COUNTY_CD C 3

County FIPS Code

O3_CLASS C 1

Ozone Nonattainment Classification

values are 1 through 9, as described above

O3_STATUS C 1

Ozone Nonattainment Status

values are: W - Whole county in nonattainment
P - Part of the county in nonattainment
a - County has been redesignated to attainment

COUNTY_NM C 36

County Name

STATE C 2

State Abbreviation

LandView™ III Help

Dams

The Dams database in LandView comes from the National Inventory of Dams, NID_1995-96 CD-ROM, produced by the U.S. Army Corps of Engineers.

The National Inventory of Dams database contains information on 75,187 dams throughout the United States and its territories. This update was authorized under the Water Resources Development Act of 1986 (P.L. 99-662), as amended. LandView uses the NIDABR database, an abbreviated version of the NID, with 29 fields of information for each of the 75,187 dams.

The National Inventory of Dams database is not intended to replace either state or federal agency databases designed to support the specific needs of each agency. Participating agencies electronically transfer selected information from their local inventory system, to a central computer at the Federal Emergency Management Agency headquarters in Washington, D.C. The database record for a dam in the National Inventory consists of data from a participating agency submitted in accordance with the update methodology, the name of the agency providing the data, and the names of other government agencies with involvement in the dam.

National Inventory of Dams Selection Criteria

When a transmittal file is received from a participating agency for the National Inventory of Dams database, the data is processed to identify specific records meeting the selection criteria under the Dam Safety Acts of 1972 and 1986. A dam record is identified for inclusion in the national database, if one of the following is satisfied: the Downstream Hazard field contains a value of HIGH or SIGNIFICANT, or the Downstream Hazard field contains a value of LOW, and the dam satisfies the following logical statement:

$$\begin{aligned} &\text{Max}(\text{Dam Hgt, Hyd Hgt, Str Hgt}) > 6 \\ &\text{and Max}(\text{Norm Storage, Max Storage}) \geq 50; \\ &\text{or} \\ &\text{Max}(\text{Dam Hgt, Hyd Hgt, Str Hgt}) \geq 2 \\ &\text{and Max}(\text{Norm Storage, Max Storage}) > 15 \end{aligned}$$

For purposes of processing the computerized field data transmitted from participating agencies, dams were considered to meet the statutory size criteria if they satisfied the above logical statement. Because of differences in regulatory programs, state agencies may track one or more of the following heights: Dam Height, Hydraulic Height, and Structural Height. To adjust for the transmission of blank values in these fields, the value used by the National Inventory to identify "Dam Height" as a selection criteria is the Maximum (Dam Height, Hydraulic Height, Structural Height). The value used for the Maximum Storage is the Maximum (Normal Storage, Maximum Storage).

The selection criteria is based on the size of the dam and on the potential threat of dam failure to life and property. The Dam Safety Act of 1972 (P.L. 92-367) provided the size criteria. The 1972 Act stated: The term dam, for purposes of the Act, was defined as "any artificial barrier, including appurtenant works, which impounds or diverts water, and which (1) is twenty-five feet or more in height from the natural bed of the stream of watercourse measured at the downstream toe of the barrier, or from the lowest elevation of the outside limit of the barrier, if it is not across a stream channel or watercourse, to the maximum water storage elevation or (2) has an impounding capacity at maximum water storage elevation of fifty acre-feet or more. This Act does not apply to any such barrier which is not in excess of

six feet in height, regardless of storage capacity or which has a storage capacity at maximum water storage elevation not in excess of fifteen acre-feet, regardless of height."

The Dam Safety Act of 1986 amended the 1972 Act definition to include dams whose failure would result in loss of human life or significant property damage, regardless of the minimum size criteria. The amendment under the Dam Safety Act of 1986 reads:

"(a) Section 1 of Public Law 92-367 (33 U.S.C. 467; 86 Stat. 506) is amended by striking out the final period and inserting in lieu thereof the following: unless such barrier, due to its location or other physical characteristics, is likely to pose a significant threat to human life or property in the event of its failure." (P.L. 99-662, Title XII-Dam Safety, Sec. 1201)

For purposes of the National Inventory, the computerized selection criteria identifies a dam for inclusion if the dam is too small to be classified under the 1972 size criteria, but the value of the Downstream Hazard field is either SIGNIFICANT or HIGH.

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for file DAMS.DBF are as follows:

NID_ID C 7

The official National Inventory of Dams identification number for the dam, known formerly as the National Id. This is a required field, and must have an entry for each dam included in the National Inventory of Dams. This field is used as the unique identifier for each dam record. The first two characters of the identity are the state two letter abbreviation, based on the location of the dam. The last five characters of the identity are a unique number (AB#####).

The NID ID is the Corps Identification No assigned to each dam in the 1981 National Inventory of Dams update, under the National Dam Inspection Program (P.L. 92-367). For those dams that were not included in the 1981 update, an identification number was generated.

STATE C 2

STATE ABBRIEVIATION

DAM_NAME C 65

Official name of the dam. For dams that do not have an official name, the popular name is used.

OTHER_NAME C 65

Reservoir name or names in common use other than the official name of the dam. Names are separated with semi-colons.

HAZARD C 11

Term indicating the potential hazard to the downstream area resulting from failure or mis-operation of the dam or facilities. Terms used are as follows: Low, Significant, High.

EAP C 3

Term indicating whether this dam has an Emergency Action Plan (EAP), which is defined as a plan of action to be taken to reduce the potential for property damage and loss of life in an area affected by a dam failure or large flood. Terms used are as follows: Yes; No; N/R. (N/R = Not required by submitting agency. For name of submitting agency, see field item #53 Source Agency)

STATE_NAME C 20

STATE NAME

CONG_DIST C 5

CONGRESSIONAL DISTRICT

COUNTY C 30

County Name

NEAR_CITY C 30

Name of the nearest downstream city, town, or village that is most likely to be affected by floods resulting from the failure of the dam.

DIST_CITY N 5 2

Distance from the dam to the nearest downstream affected City-Town-Village, to the nearest mile. (See field item #10 NEAR CITY)

RIVER C 30

Official name of the river or stream on which the dam is built. If the stream is unnamed, it is identified as a tributary ("TR") to the named river. If the dam is located offstream, the name of the river or stream is entered plus "-OS" or "OFFSTREAM".

PRM_PURPOS C 15

Term indicating the primary purpose for which the reservoir is used. A calculated field based on the leading code provided in field item #26 PURPOSE. Terms used are as follows: Irrigation; Hydroelectric; Flood Control; Navigation; Water Supply; Recreation; Fire/Farm Pond; Fish & Wildlife; Debris Control; Tailings; Other.

NID_DAMTYP C 8

Term indicating dam type as one of the following: Arch,

Buttress, Gravity. A calculated field, based on the codes provided in field item #27 DAM TYPE, using the following precedence: (VA or MV) = Arch; B = Buttress; not (VA, MV or B) = Gravity.

YEAR_COMPL	N	4	
Year Completed			
NID_HEIGHT	N	8	
Dam Height			
NID_STOR	N	12	
Maximum Storage (acre-ft)			
DAM_LENGTH	N	9	
MAX_DISCH	N	9	
Number of cubic feet per second (cu ft/sec) which the spillway is capable of discharging when the reservoir is at its maximum designed water surface elevation.			
OWNER	C	50	
OWN_TYPE	C	14	
OWN_TYPE			
STATE_AGCY	C	30	
STATE_AGCY			
FED_AGCY	C	20	
FED_AGCY			
SOURC_AGCY	C	9	
SOURC_AGCY			
SOURC_DATE	D	8	
SOURC_DATE			
LONGITUD_X	N	12	6
LONGITUD_X			

LATITUDE_Y	N	10	6
LATITUDE_Y			

FIPS_STATE	C	2	
FIPS_STATE			

FIPS_CNTY	C	6	
FIPS_CNTY			

IDMARPLOT	C	16	
MARPLOT ID Number			

LandView™ III Help

Airports

The Airports database in LandView comes from the National Transportation Atlas Databases: 1995, a CD-ROM publication of the Bureau of Transportation Statistics (BTS), an operating administration of the U.S. Department of Transportation.

The Airports database is a comprehensive geographic database of landing facilities in the United States containing information on the physical characteristics of the landing facilities, their usage characteristics, including enplanements and operations, for several categories of usage, capacity measurements, military usage rights, and other pertinent data. The database includes landing facilities in all 50 states as well as US territories.

A companion geographic database, RUNWAY, contains information on the physical characteristics of the runways for all of the airports in this database.

Also included are PCX images for over 100 airports that were originally scanned from the publication, U.S. Terminal Procedures, published by National Oceanographic and Atmospheric Administration (NOAA), U.S. Dept. of Commerce, and then heavily edited by various parties.

ORIGINATING AGENCY

Volpe National Transportation Systems Center

AGENCY RESPONSIBLE FOR MAINTAINING DATA

Volpe National Transportation Systems Center

CONTACT

National Transportation Atlas Databases

Bureau of Transportation Statistics

U.S. Department of Transportation

Washington, DC 20590

(202) 366-DATA

Internet: info@bts.gov

SOURCE

Data were merged from four different Federal Aviation Administration (FAA) landing facilities databases:

National Flight Data Center (NFDC) database for February 1994

National Plan of Integrated Airport Systems (NPIAS) database, current as of May 1994

Air Carrier Activity Information System (ACAIS) database for calendar year 1992

Terminal Area Forecast (TAF) for FY91

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for file AIRPORTS.DBF are as follows:

ID C 10
ID NUMBER

LONG N 12 6
LONGITUDE

LAT N 12 6
LATITUDE

LOCID C 4
AIRPORT IDENTIFIER

SITE_NO C 10

FAC_TYPE C 1
Facility Type
 A Airport
 H Heliport
 S Seaplane Base
 T Stolport

FAC_NAME C 42
Facility Name

CITY C 26
CITY

COUNTY C 15
County Name

STATE C 2
STATE ABBREVIATION

FAA_REGION C 3

FAC_USE C 2
Facility Use
 PU Open to the public
 PR Private

OWNER_TYPE C 2

OWNER_NAME C 29

ELEVATION N 10 2

CBD_DIST N 4

Distance from the central business district of the associated city to the landing facility in nautical miles (1 nautical mile = 6,080 feet).

CERT_TYPE C 2

Desc: Codes AS, BS, CS, DS, ES are for landing facilities having a full certificate under FAR Part 139 and receiving scheduled air carrier service from carriers certified by the Civil Aeronautics Board. The A, B, C, D, E identifies the aircraft rescue and fire-fighting index for the landing facility, and the 'S' is for scheduled air carrier service.

Codes AU, BU, CU, DU, EU are for landing facilities having a full certificate under FAR Part 139 but not currently receiving scheduled service.

Code 'LS' is for landing facilities having limited certification under FAR Part 139 and receiving scheduled air carrier service.

Code 'LU' is for airports having limited certification under FAR Part 139 and not currently receiving scheduled air carrier service.

'N' or a blank indicates the facility is not certificated.

CERT_DATE C 5

Certification Date

CUST_INTL C 1

Desc: Whether the landing facility has been designated by the U.S. Treasury as an international airport of entry for customs.

Y Yes

N No

The data in this field are suspect.

CUST_LAND C 1

Desc: Whether the landing facility has been designated by the U.S. Treasury as a customs landing rights airport (some landing facilities may have these rights for cargo

only).
Y Yes
N No

JOINT_USE C 1
Desc: Whether the landing facility has a
military/civil joint use agreement that
allows civil operations at a military airport
or military operations at a civil airport.
Y Yes
N No

MIL_LAND C 1
Desc: Whether the airport has entered into an
agreement that grants landing rights to the
military.
Y Yes
N No

NATL_EMER1 C 2
Desc: Status of an airport that is available for
use during a national emergency. These are
civil airports that were formerly military
airfields but the military services have a
continuing interest in their use during
national emergencies. Up to four different
status conditions can be given for the
landing facility. Each status condition
appears in its own field. The first status
condition appears in this field.
1 Airport certificated under FAR Part 139.
2 Civil airport where military use is subject to lease.
3P Airport is partially released from national emergency use provision.
3E Airport is entirely released from national emergency use provision.
4 Airport includes surplus real property which has been conveyed for, or converted to, revenue
production.
5 Exclusive military use airport.
6 The airport is in the process of disposal or reversion.
7P A letter of intent has been issued to release a part of the airport property.
7E A letter of intent has been issued to release the entire airport property.
8 An exclusive right has been granted (whether or not in violation of an agreement).
8P An exclusive right has been granted (whether or not in violation of an agreement); however,
this exclusive right is of the proprietary type.
8N An exclusive right exists through a P.L. 80-289 deed providing exemption for fuel and oil
sales; however, an exclusive right for fuel oil sales has not been granted.

NATL_EMER2 C 2
Nat'l Emerg Status 2

NATL_EMER3 C 2
Nat'l Emerg Status 3

NATL_EMER4 C 2

Nat'l Emerg Status 4

MIL_EMER1 C 1

Desc: Military department(s) that maintains national emergency use interest in this civil facility. Up to three different military departments can be shown as having emergency use interest in the facility. Each military department appears in its own field except where all three departments have emergency use interest in the facility (where an 'E' appears in the first field). The first military department appears in this first field.

A Air Force

R Army

N Navy

E Air Force, Army, and Navy

X None (applicable only where there is an entry in Field 23)

MIL_EMER2 C 1

Mil Emerg Int 2

BASED_MIL N 6

Desc: The number of operational military aircraft based at the landing facility.

NO_RUNWAYS N 3

Desc: The number of runways at the landing facility. This number was obtained by counting the number of runway records (excluding helipad records) associated with each landing facility. (a key field)

NO_PADS N 2

Desc: The number of helipads at the landing facility. This number was obtained by counting the number of helipad records associated with each landing facility.

NPIAS C 1

NPIAS Airport?

VFR_HRS N 10

Desc: The hourly capacity of the existing runway system in terms of takeoffs/landings under Visual Flight Rule (VFR) weather.

IFR_HRS N 5

Desc: The hourly capacity of the existing runway

system in terms of takeoffs/landings under Instrument Flight Rule (IFR) weather.

CONG_LEVEL C 1

Desc: A seemingly subjective measure of the level of congestion at an airport.

S Severe

M Moderate

U Uncongested

SER_LEVEL C 2

Desc: Used to indicate the highest level of service available to the public at the airport.

Commercial service airports are those airports receiving scheduled passenger service, i.e., service operated pursuant to published flight schedules, and having 2,500 or more annual enplanements. Primary service airports are those commercial service airports having 10,000 or more annual enplanements. Reliever airports are general aviation airports in metropolitan areas that are intended to reduce congestion at large commercial service airports by providing general aviation pilots with alternative landing areas.

PR Primary commercial service airport

CM Commercial service other than primary airport

GA General aviation airport

RL General aviation airport that serves as a reliever airport or heliport

CR Commercial service airport that also serves as a reliever airport

LONG_FLT C 1

Desc: The longest non-stop commercial service flight scheduled from the airport.

S Short (less than 500 statute miles)

M Medium (500 to 1,500 statute miles)

L Long (more than 1,500 statute miles)

AIRCR_TYPE C 2

Desc: The largest aircraft operating at the airport on a regularly scheduled basis.

HV DC-10, B-747, L-1011, A-300, A-310, B-767

CT Aircraft with 30 seats or less

TP All other transport type aircraft, having more than 30 seats but smaller than 'HV' aircraft, e.g., DC-9, B-727.

This field contains no entry for airports without scheduled service.

LGE_CERT N 10

Desc: Total domestic and foreign enplanements on large certificated U.S. air carriers during calendar year 1992. A large certificated air carrier is a carrier holding a certificate issued under Section 401 of the Federal Aviation Act of 1958 and that operates aircraft designed to have a maximum passenger seating capacity of more than 60 seats or a maximum payload capacity of more than 18,000 pounds or that conduct international operations. (a key field)

COMM_ENPL N 7

Desc: Total enplanements by small certificated air carriers during calendar year 1992 operating scheduled service. Scheduled service provides five or more round trips per week between two or more points, with flight schedules published which specify the times, days of the week, and points between which such flights are performed. Small certificated air carriers are those air carriers providing scheduled service as defined above and that operate aircraft whose payload capacity is less than 18,000 pounds and have a maximum seating capacity less than 60 seats. Some of these air carriers may also provide on-demand taxi service. Enplanements on flights by small certificated air carriers which provide air taxi service are counted under the next category, "air taxi enplanements."

AIR_TAXI N 7

Desc: Total enplanements on air taxis during calendar year 1992. Air taxi flights are any on-demand flights by aircraft with a gross take-off weight of 6,000 pounds or more. While these flights will usually be provided by taxi air carriers, some of these flights may be provided by small certificated air carriers.

FOR_ENPL N 8

Desc: Total enplanements by foreign carriers during calendar year 1992. This data has been sanitized to exclude those airports where the number of foreign carriers providing service was less than three. At these airports, the number of foreign enplanements was added to the number of large certificated air carrier enplanements.

INTR_ENPL N 10
Desc: Passengers onboard international flights which transit an airport for purposes other than boarding and deboarding passengers, limited to airports in the 48 contiguous states. This data has been sanitized to exclude those airports where at least one of the carriers transiting was foreign and the total number of carriers transiting was less than three. At these airports, the number of in-transit enplanements was added to the number of large certificated air carrier enplanements.

TOT_ENPL N 10
Desc: Total enplanements during calendar year 1992 (the sum of large certificated, commuter, air taxi, foreign, and in-transit enplanements). (a key field)

ENPL_DATA C 1
Desc: Used to indicate at which airports the foreign enplanement and/or the in-transit enplanement data has been sanitized.
0 No data was sanitized
1 The foreign enplanement data was sanitized
2 The in-transit enplanement data was sanitized
3 Both the foreign enplanement data and the in-transit enplanement data were sanitized

HUB_SIZE C 1
Desc: Categorization for commercial service airports according to the percentage of the total national enplanements for which they account. Large hubs are airports with one percent or more of the national enplanements. Medium hubs are airports with 0.25 to one percent of the national enplanements. Small hubs are airports with 0.05 to 0.25 percent of the national enplanements. Non-hubs are airports with less than 0.05 percent of the national enplanements. General aviation are airports that are not commercial service airports. Commercial service airports are defined in the Field 36 description.
L Large
M Medium
S Small
N Non-hub
G General Aviation

TOWER C 1

Desc: 0 non-towered

- 1 FAA tower
- 2 =new FAA tower this year
- 3 RAPCON/RATTC
- 4 decommissioned
- 5 TRACON
- 6 common IFR room
- 7 tower candidate
- 9 military
- A FAA contract tower
- B Leased to state or local government
- C FAA tower operated by military
- D State or local government
- E Non-Federal contract tower
- F FAA tower closed temporarily
- G FAA contract tower not in ATA count

TOWER_HRS N 2

Desc: The number of hours per day the tower is operational. Theoretically, this field should have values for towered airports only.

OPS_DATA C 1

Desc: Indicates whether the operations data contained in the NFDC database has been enhanced by the FAA staff that develops the TAF. At all towered airports the operations data is enhanced by using the tower counts instead of the NFDC data. At about another 360 airports the NFDC data has been enhanced by the FAA field offices.

Y Yes

N No

CARR_ITIN N 7

Desc: Total takeoffs and landings by scheduled air carriers during FY91 (fiscal year 1991, i.e., October 1990 - September 1991). (a key field)

TAXI_ITIN N 6

Desc: Total takeoffs and landings by air taxi services during FY91.

GA_ITIN N 6

Desc: Total general aviation takeoffs and landings during FY91 that were not operating entirely in the local traffic pattern or within a 20-mile radius of the airport.

MIL_ITIN N 7

Desc: Total military takeoffs and landings during

FY91 that were not operating entirely in the local traffic pattern or within a 20-mile radius of the airport. (a key field)

TOT_ITIN N 7

Desc: Total itinerant operations during FY91, which is the sum of air carrier itinerant operations, air taxi itinerant operations, general aviation itinerant operations, and military itinerant operations. (a key field)

GA_LOCAL N 6

Desc: Total general aviation takeoffs and landings during FY91 by general aviation aircraft operating entirely in the local traffic pattern or within a 20-mile radius of the airport.

MIL_LOCAL N 6

Desc: Total military takeoffs and landings during FY91 by military aircraft operating entirely in the local traffic pattern or within a 20-mile radius of the airport.

TOT_LOCAL N 7

Desc: Total local operations during FY91, which is the sum of general aviation local operations and military local operations. (a key field)

TOT_OPS N 8

Desc: Total operations during FY91, which is the sum of total itinerant operations and total local operations. (a key field)

IMAGE_FILE C 12

Desc: Contains the references to the PCX image files that contain scanned images of the runway and terminal layouts for over 100 large commercial airports. These images can be viewed in TRANSCAD by invoking the Query Image command and pointing to and clicking on an airport that contains one of these PCX files.

NEAR_HGWY N 7

NEAR_STRA N 7

NEAR_RAIL N 7

CHAR1	C	10
CHAR1		

CODE_CHAR1	C	4
CODE_CHAR1		

LONG_INT1	N	10
LONG_INT1		

REAL_FLOT1	C	10
REAL_FLOT1		

IDMARPLOT	C	16
MARPLOT ID Number		

U.S. Highways, Railroads, and Water

U.S. Highways, Railroads, and Water are layers present on the MARPLOT map for the national LandView CD (#11). These layers are not present on CDs 1-10, since those CDs have the detailed network of roads, railroads, and water extracted from the TIGER/Line 1995 files. There are no database files associated with the roads, railroads, and water layers.

The **U.S. Highways** map layer comes from the National Transportation Atlas Databases: 1995, a CD-ROM publication of the Bureau of Transportation Statistics (BTS), an operating administration of the U.S. Department of Transportation.

The original source of the data is the National Highway Planning Network (Version 2.0). It includes approximately 420,000 miles, or 11%, of the Nation's public roads including the proposed National Highway System. The originating agency is the Federal Highway Administration, Office of Environment and planning, HEP-11.

CONTACT Steve Lewis
Federal Highway Administration
HEP-11, Room 3301
400 7th Street, SW
Washington, DC 20590
Internet: slewis@intergate.dot.gov

DATA SOURCE

1:100,000 USGS Digital Line Graphs (DLGs), 1989 supplemented by editing by the University of Tennessee for the Federal Highway Administration, 1994.

ACCURACY

80 m (200 ft) root-mean square positional accuracy

The **U.S. Railroads** map layer comes from the National Transportation Atlas Databases: 1995, a CD-ROM publication of the Bureau of Transportation Statistics (BTS), an operating administration of the U.S. Department of Transportation. The originating agency is the Federal Railroad Administration

DATA SOURCE

1:2,000,000 USGS Digital Line Graphs supplemented by editing performed by the Federal Railroad Administration.

ACCURACY

1,200 m (0.75 mi) root-mean square positional accuracy

The **U.S. Water** map layer comes from the U.S. Geological Survey, 1:2,000,000 Digital Line Graphs.

LandView™ III Help
Canadian Places

The Canadian Places database in LandView comes from the [Digital Chart of the World \(DCW\)](#), Edition 1, a CD-ROM publication of the United States Defense Mapping Agency. The MARPLOT map layers for Canadian Province boundaries, roads, and railroads, also comes from the DCW.

LandView™ III Help
Mexican Places

The Mexican Places database in LandView comes from the [Digital Chart of the World \(DCW\)](#), Edition 1, a CD-ROM publication of the United States Defense Mapping Agency. The MARPLOT map layers for Mexican State boundaries, roads, and railroads, also comes from the DCW.

LandView™ III Help

Schools

The Schools data in LandView comes from the [Geographic Names Information System](#), a CD-ROM publication of the U.S. Geological Survey. Schools are shown on the map with the symbol {bmc school.bmp}.

LandView™ III Help

Hospitals

The Hospitals data in LandView comes from the [Geographic Names Information System](#), a CD-ROM publication of the U.S. Geological Survey. Hospitals are shown on the map with the symbol {bmc hospital.bmp}.

LandView™ III Help

Churches

The Churches data in LandView comes from the [Geographic Names Information System](#), a CD-ROM publication of the U.S. Geological Survey. Churches are shown on the map with the symbol {bmc church.bmp}.

LandView™ III Help

Cemeteries

The Cemeteries data in LandView comes from the [Geographic Names Information System](#), a CD-ROM publication of the U.S. Geological Survey. Cemeteries are shown on the map with a small dot.

LandView™ III Help

Zip Codes

The Zip Code file in LandView was prepared by the Bureau of Census from the U.S. Postal Service (USPS) City-State file (January, 1997). This file contains all 5-digit ZIP codes defined as of January 1, 1997 and the city, county and Post Office names associated with them.

The Census Bureau then determined a geographic coordinate (latitude and longitude) for each ZIP code in the City-State file by processing it against the Bureau's internal TIGER database for the state and county specified for the ZIP code. (Before processing the file against TIGER, the Census Bureau excluded overseas military APO/FPO records from the file). For those records where the ZIP code could not be located in the TIGER database, the county internal point (in many cases the geographic centroid) was assigned to the ZIP code. This typically occurred on records containing either a "P" or "U" in the ZIP_CLASS field.

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for file ZIP_CODE.DBF are as follows:

ZIP_CODE C 5
The 5-digit zip code.

LATITUDE C 10
Latitude expressed as a signed integer with six decimal places.
Negative numbers are in the southern hemisphere.

LONGITUDE C 11
Longitude expressed as a signed integer with six decimal places.
Negative numbers are in the eastern hemisphere.

ZIP_CLASS C 1
Zip Code classification. Values are:
M = APO/FPO Military Zip
P = P.O. Box
U = Unique Zip, assigned to large corporations or
government agencies
Blank = Non-unique Zip, shared by numerous residences
and businesses

NAME C 28
USPS Post Office name.

STATE_CODE C 2
FIPS state code.

COUNTY_CD C 3
FIPS county code.

LandView™ III Help

New

The "New" option of the File menu allows you to create a new xbase (dBase/Foxpro) file. The standard Foxpro version 2.6 file creation dialog is used. In defining each field in your file, you must specify a field name, type (character, numeric, etc.), length, and number of decimal places (if the type is numeric). After your file has been created, you can open it with the [Open](#) option of the File menu. You can add data records to your file with the [Append a Record](#) option of the Records menu, and you can modify data records in your file with the [Browse/Edit](#) option of the Records menu.

If you want to be able to plot your data points on a MARPLOT map, your file must have a field named IDMARPLOT, plus a field containing latitude, and a field containing longitude (these fields can have any name). The latitude and longitude values must be in decimal degrees (example: 36.753644, -77.3988775).

The IDMARPLOT field must be 16 characters. You do not have to enter any data into this field, since LandView will fill an empty IDMARPLOT field with an appropriate number. Allowable values in the IDMARPLOT field are 0 through 9, and A through F.

LandView™ III Help

Open

The "Open" option of the File menu allows you to open an xbase (dBase/Foxpro) file. The records in the file will be displayed in a standard [Browse/Edit](#) window. You must first [Close](#) the file before you can open another. If you choose any other database from the File menu while another file is opened, the opened file will automatically be closed before the system enters the new database.

Note: You will get errors in the Windows version of LandView if you try to open a file with a long file name (a name longer than the standard DOS 8.3 format). You will get errors opening a file if the file name contains spaces (on either Windows or Macintosh versions). You should rename those files before opening them in LandView.

LandView™ III Help

Close

The "Close" option of the File menu serves to close the xbase(dBase/Foxpro) file that is currently opened. Any modifications that you may have made to the file will be saved. You must first close a file before you can [Open](#) another.

LandView™ III Help

Modify File Structure

The "Modify File Structure" option of the File menu allows you to change the field attributes of a file, or to create new fields. **Use extreme caution when modifying a file structure.** If you delete a field, or change a field's name, the data in that field will be lost. It is usually safe to add new fields to a file.

Print

This function will create a report from the current database file. The report can be sent to the printer, to a text file, or displayed on the screen. You may choose to print only the current record, or all records in the file. If you have a queried set, either from performing a query, or from choosing "Get Info" from MARPLOT, only records in the queried set will be available for printing.

You can specify a page heading, and indicate which fields should be included in the report. The two list boxes show which fields will be included and excluded from the report. By highlighting a particular field and pressing either the left or right arrow, you can move the field between the "included" and the "excluded" boxes. Or you may choose "include all" or "exclude all". If you want the report to contain only a small subset of the fields, you should "exclude all", and then "include" each individual field.

The report will have one line per field, containing the field name and value, with records separated by a horizontal line.

LandView™ III Help

Printer Setup

The "Printer Setup" option of the File menu invokes the standard printer setup dialog for your Windows or Macintosh system. This dialog is not part of the LandView software.

LandView™ III Help

Set File Directories

The "Set File Directories" option of the File menu allows you to specify the location of the standard LandView database files (Census and EPA data). It is normally not necessary to use this function if you are using LandView from a CD-ROM, or if the files are on a hard disk in a directory structure that is the same as the directory structure of the CD-ROM (which is: \DATA\CENSUS, and \DATA\EPA, both at the root of the drive). If you have changed either the directory or any of the file names, you can specify the directory and name with the "Set File Directories" function. Changes made in this way are saved for subsequent LandView sessions.

LandView™ III Help

Exit

Choosing "Exit" from the File menu will close all files and end the LandView database program. It will not, however, end the MARPLOT program. MARPLOT can be ended using its own File/Exit option.

LandView™ III Help
Records Menu

The Records Menu is active only when a file is opened.

Options for searching a file are [Find Record](#), and [Query](#).

Options for viewing and modifying data in a file are [Browse/Edit](#), and [Append a Record](#).

Options for importing and exporting records in a file are [Append from External File](#), and [Copy to External File](#).

Options for record and index maintenance are [Pack](#), [Reindex](#), and [Create Index](#).

The [Set Order](#) option lets you determine in what order the records are displayed in the browse window.

LandView™ III Help

Find Record

The "Find Record" option is a way to search a database for a particular record, based on a text string that you specify. Normally, the field to search is a "name" field, such as "Facility Name". You can, however, choose a different field from the pull-down box. After entering the value to search for, press the "Find" button. LandView will bring you to the first record it finds that starts with the specified value in the specified field.

LandView™ III Help

Query

The "Query" option of the Records menu provides a way of selecting records that meet certain criteria. After a query, you will be working with a subset of records rather than with the entire database. This is in contrast to the [Find](#) option, which does not result in a subset of records, but merely points to a particular record in the database.

The query criteria is specified in three steps:

- 1) choose a field by clicking on a name in the scrolling field list.
- 2) choose an operator (such as "equals", "greater than", "less than") by clicking the appropriate radio button in the operator box.
- 3) enter a value in the value text box.

An example of a simple query is "Facility_Name equals Acme". To make a more complex query, press either the "And" or the "Or" button, and continue with another set of "field, operator, value" choices. An example of a more complex query is "Facility_Name equals Acme" and "Facility City equals Boston".

Each criterion is displayed in the "completed expressions" box, in FoxPro language format. To remove a criterion, click on the appropriate line in the "completed expressions" box and press the "Remove" button.

When you are finished entering criteria, press the "Process" button, and the system will tell you how many records it found that met your criteria. Then press the "Return" button to view the set of data records.

To save the query criteria, press the "Save" button, and enter a title for the query. Later, you can press the "Open" button to retrieve a previously-saved query. Note that when you open a query, you do **not** have to process it again, but simply press the "Return" button to view the database records.

To copy, or export, the records in the queried set to another file, press the "Export" button. The file types that you can export to are: xbase (dBase/Foxpro/Clipper), fixed length text, Lotus spreadsheet, Excel spreadsheet, and tab delimited.

To remove a queried set and return to the full database, press the "Clear" button, and then the "Return" button.

In the lower left of the query screen is an area where you can choose the type of query to perform. These are as follows:

Replace query: replaces any previous query you may have performed on the current file. This is the default.

Query-on-query: performs the new query exclusively on the set of records from the previous query.

Append query: performs the new query, and appends the results to the results of the previous query.

LandView™ III Help

Browse/Edit

The Browse/Edit function lets you view a database as a scrolling list of records. Use the vertical scroll bar to page through the records, and the horizontal scroll bar to pan across and view additional fields in the records.

The contents of database fields can be modified, simply by clicking into the field and typing new values (this does not apply to files which are "read only", such as those on a CD-ROM.)

The "Change" mode of "Browse/Edit" displays the records with the fields in a vertical list, with no horizontal scrolling component.

There are two types of Browse windows, single partition and double partition. The default for Census and EPA data is a single partition, while the default for all other data files is a double partition. The double partition gives a record list in the left partition, and an "Change" mode field list in the right partition. The black box on the bottom of the window can be dragged to change the relative sizes of the two partitions, or dragged completely to one end to give a single partition.

Whenever a browse window is active, there will be an additional menu named "Browse". This menu allows you to do the following:

- change between "Browse" and "Change" mode
- alter the display characteristics of the fields
- link or unlink the two partitions (if linked, moving to a new record in one partition will move to the same record in the other partition)
- locate records
- mark records for deletion
- append new records.

LandView™ III Help

Append a Record

The "Append a Record" option puts you in a "Change" mode window display, allowing you to enter field values for a new record.

Append from External File

The "Append from External File" option allows you to import data from another file. The file types that you can import from are: xbase (dBase/Foxpro/Clipper), fixed length text, Lotus spreadsheet, Excel spreadsheet, and tab delimited. If importing from an xbase file, only fields with the same name as fields in the receiving file will be imported. Caution should be exercised when importing from any of the other formats, to insure that the data in the external file matches the field layout of the receiving file. For example, the fixed length text file should have one line of text for each record to be imported, and fields must be the same length, and in the same order as in the receiving file.

LandView™ III Help

Copy to External File

The "Copy to External File" option exports records in the currently-opened file to any of the following formats: xbase (dBase/Foxpro/Clipper), fixed length text, Lotus spreadsheet, Excel spreadsheet, and tab delimited. This is the inverse of the [Append from External File](#) option. If you have a query active on the file (i.e., a subset of records), only those records will be copied.

LandView™ III Help

Pack

Records that are marked for deletion can be permanently removed from database by using the "Pack" function. To mark records for deletion, you must be in "Browse" mode, and choose "Toggle Delete" from the Browse menu. Records tagged for deletion are displayed with a black box in the left margin. Alternatively, you can click in the left margin of a record to toggle the deletion mark.

Reindex

The "Reindex" option will recreate the standard Foxpro index for the current file. The index file (with a .CDX extension) must already exist. To create a new index, use the [Create Index](#) option from the Records Menu.

LandView™ III Help
Create Index

Use the "Create Index" option to create a Foxpro "CDX" index file, or to add another index to an existing CDX file. Simply click on the field you want to index on in the scrolling field list, and press the "Index" button. You may also create indexes on expressions that may include more than one field. Enter the expression in the text box at the top.

The primary reason for creating indexes is to have different ways of displaying the records in a file. Use the [Set Order](#) option to activate an index.

The database files on the LandView CD-ROM already contain indexes. You would therefore choose this option for new files, or files not part of the original LandView system.

Set Order

The "Set Order" option lets you specify the sort order to view database records in. Simply choose the indexed field or expression from the list, and press the "Set Order" button. If you want to show records in an order for which there is no index, use the [Create Index](#) option from the Records Menu.

Map Menu

The Map Menu contains options that allow you to interact with the [MARPLOT](#) mapping program.

To view data records on the map, choose [Show on Map](#), [Show All on Map](#), or [Show Only on Map](#).

To set the map display characteristics (color, pattern, etc.) based on database field values, choose [Thematic Mapping](#).

To switch to the MARPLOT application, choose [Go to Map](#). Note that the "Show on map" functions also switch to MARPLOT.

In order for LandView to perform a "Show on Map" or a "Thematic Mapping" operation, it must know which MARPLOT map layer corresponds to the current database file. Use [Associate File with Map Layer](#) to accomplish this.

While MARPLOT knows where to find the maps on a LandView CD-ROM, there are times when you may need to tell MARPLOT where to find maps on a hard disk. The [Install a Map Directory in MARPLOT](#) accomplishes this.

Use the [Create a MARPLOT Import File](#) option to plot records in an xbase file onto a MARPLOT map.

The [Estimate Population Around Current Map Pointer](#) option will summarize Census population data at the block group level for the radius you specify.

The [Describe Census Areas at Current Map Pointer](#) option will identify the state, county, census tract/bna, and census block group at the location of the current map pointer.

The [Go To Zip Code](#) option will ask you to enter a 5-digit zip code. If the zip code is found in the [LandView Zip Code database](#), MARPLOT will come forward with the focus point at the center of that zip code.

The [Match Records to Census Areas](#) option matches latitude and longitude coordinate values in the currently-opened file to the Census areas (state, county, tract, and block group) that the coordinates fall within on the MARPLOT map.

LandView™ III Help
Show on Map

The "Show on Map" function will ask **MARPLOT** to come forward and to show the particular map object corresponding to the current database record (the current database record is either the record on the current detail screen, or the highlighted record in a browse window.) This operation will be successful only if the current database record has a corresponding map object in MARPLOT. If it does not, MARPLOT will tell you it cannot find the object. Nearly all of the database records in LandView III have corresponding map objects, although there are cases where the data record did not have the latitude & longitude values that would enable a map object to be created.

When MARPLOT finds the record it will "select" it (MARPLOT places tiny boxes around the border of selected polygons, or around the symbol of selected point objects.) For polygon objects like States, Counties, and Census Tracts, MARPLOT will zoom in so that the selected object just fits the screen.

You can control whether or not MARPLOT changes the map scale to fit the object, by using the [Associate File with Map Layer](#) option.

The [Show All on Map](#) function is similar the "Show on map", except that it performs the operation for a collection of database records rather than for a single record.

LandView™ III Help
Show all on Map

The "Show all on Map" function is similar to the [Show on Map](#) function, except that instead of showing the map object for a single database record, it shows the map objects for a collection of records. Typically, this collection of records results from a [Query](#) operation.

Whenever "Show All on Map" is chosen, MARPLOT will zoom in or out to fit all the selected objects on the screen. If MARPLOT cannot find one or more of the map objects in the collection, it will tell you so. Nevertheless, it will select and show the objects it does find.

LandView™ III Help

Show Only on Map

The "Show Only on Map" function causes MARPLOT to show a collection of map objects resulting from a [Query](#) operation. MARPLOT does not select the objects, but rather hides all objects on the layer that are not in the collection. This differs from the other "Show on Map" functions, which cause MARPLOT to display all objects in the layer while selecting those in the collection.

Whenever "Show Only on Map" is chosen, MARPLOT will zoom in or out to fit all the objects on the screen. If MARPLOT cannot find one or more of the map objects in the collection, it will tell you so. Nevertheless, it will show the objects it does find.

LandView™ III Help
Thematic Mapping

The "Thematic Mapping" function allows you to set colors, patterns, and symbols for objects on the map, based on values in a database field. For example, you can display counties in various colors based on the median household income.

When you first enter the Thematic Mapping area, you will see a list of thematic mapping sets that you have created (the list will be empty if you have not yet performed a thematic mapping operation.)

To define a new set, press the "New" button. Or to change the definition of an existing set, highlight the set name on the list and press the "Settings" button.

The Thematic Mapping definition dialog lets you enter a title, choose a database field from the pull down list, and specify display characteristics based on database field values.

You can specify up to seven categories, each category having a range of data field values and corresponding color, pattern, line style, and symbol. To enter the range values, click into the "from" and "to" areas and type the values. A default color will be selected by the system, which you can change by clicking on the color square. Similarly, you can change the pattern, line style and symbol by clicking on those. (Note that the symbol is not applicable to polygon objects, and that pattern and line style are not applicable to point objects.)

If only a single value, rather than a range, applies to your field, you should enter it in the "from" area.

For numeric database fields, you can have the system enter range values for you, by pressing the "Express Setup" button. The system will take a sample the database records to come up with values that approximate an even distribution of records among the categories. You can specify the number of categories (from 2 to 7) in the box below the "express Setup" button.

When you have finished the Thematic Mapping definition, press the "OK" button to return to the list screen.

To activate any Thematic Mapping set in the list, highlight it and press the "Turn On" button. The process of "turning on" a thematic mapping set may take a few moments, as LandView and MARPLOT exchange information about the map objects in question. Then choose "Show on Map" to switch to MARPLOT and view the results.

When you no longer want to view the map objects in a thematic fashion, press the "Turn Off" button, and MARPLOT will return to its normal way of displaying the objects.

The drawing of map objects using the thematic map settings you specified will occur only for those map objects that were in the MARPLOT view window at the time of your request. Therefore, if you subsequently zoom out, MARPLOT will still only draw the objects that were in the previous view window. If you want the thematic map settings to apply to your new view window, go back to LandView, go to the thematic mapping list, simply turn off the set, and turn it back on to have it reprocessed for the current view window.

LandView™ III Help

Go to Map

The "Go to Map" function will simply switch to the MARPLOT application, without asking MARPLOT to change its map display.

LandView™ III Help

Associate File with Map Layer

In order for LandView to perform a "Show on Map" or a "Thematic Mapping" operation, it must know which MARPLOT map layer corresponds to the current database file. Use the "Associate File with Map Layer" function to accomplish this. The databases that come with the LandView CD-ROM are already associated with MARPLOT map layers, and so you normally do not need to perform this function. When you create a new file, or open a file that is not part of the original LandView system, and you want the data records in that file to be placed on the MARPLOT map, you must first perform this association function.

In associating database records with map objects, there are three choices:

- 1) New map objects will be placed on existing maps and layers;
- 2) New map objects will be placed on newly-created maps and layers;
- 3) Map objects for your database records already exist, and you only need to associate them.

See the [Create a MARPLOT Import File](#) option for details on creating new map objects from your database records (options 1 and 2 above). Option 3 is described later in this section.

When entering the MARPLOT layer and map names, if the map layer already exists in MARPLOT (options 1 and 3 above), enter the name exactly as it appears in the MARPLOT layer list. Similarly, if the map already exists in MARPLOT, enter the name exactly as it appears in the MARPLOT map list. Otherwise, enter any unused layer and map names of your choice (option 2 above).

Answer the "Zoom when showing on map?" question, to specify whether MARPLOT should change the map scale to fit the object when you make a "Show on Map" request.

The "predominant object type" is used for building the MARPLOT legend when these objects are displayed in a thematic mapping operation. For example, if the predominant type is "Point", the legend will show the symbol. If it is a "Polygon", the legend will show a small polygon in the appropriate color and pattern.

It is possible to have a database file associated with an existing map layer, such as states or counties. For example, you may have a database that contains information about restaurants in each county of the U.S. The database has fields for state-code, county-code, and the number of restaurants. You may want to do a thematic mapping operation such that counties are displayed in red if they have less than 1000 restaurants, and in green if they have more. Since there is already a counties layer in MARPLOT, you can associate your database file with the counties layer. Since you will not be creating any new map objects, you do not need latitude/longitude information in your database. You will, however, need the IDMARPLOT field (16-characters), and in that field must be the 5-character state and county fips code (example: 06003).

In similar fashion, you can relate database files to any of the other Census map layers. Below is a table showing the Census layer, and what must be placed in the IDMARPLOT field for the association to work.

States
state code

Counties

state code + county code

Census Tracts

state code + county code + 6-digit tract number

Census Block Groups

state code + county code + 6-digit tract number + 1-digit block group number

Congressional Districts

state code + 2-digit cong. district number

Metro. Statistical Areas

4-digit MSA code

Minor Civil Divisions (MCD)

state code + 5-digit MCD code

Indian Lands

4-digit Indian Land code

Install a Map Directory in MARPLOT

If you are running LandView from the CD-ROM, both LandView and MARPLOT know where to find data and map files. If, however, you have copied files from the CD to a hard disk, it may be necessary to tell the system where the files are located. The [Set File Directories](#) function will perform this task for database files. In [MARPLOT](#), specifying the location of map files is performed with the "Find New Map" option of the "Map List" dialog. If you are operating on a large number of files (for example, an entire state with hundreds of county map file directories), using the "Find New Map" procedure (one map directory at a time) can be quite time consuming. The process can be automated by having LandView tell MARPLOT to find all of the map directories at one time.

When you choose this option, you are asked to specify a directory, under which are many sub-directories, each containing a map. MARPLOT will add each of those maps to its map list, and make them available for viewing. For example, if you have copied all map directories for the state of Maryland (directory \24, with subdirectories for each county, 001, 002, etc.), then the directory to specify would be \24. MARPLOT will then find all of the county maps in the subdirectories below \24.

This operation needs to be performed only once, as MARPLOT will remember the maps for future sessions.

LandView™ III Help

Create a MARPLOT Import File

The "Create a MARPLOT Import File" function assists you in converting database records to map objects that can be viewed in MARPLOT.

In order to get map objects into MARPLOT, you must have a file for MARPLOT to import. The [MARPLOT](#) Help system will have more information about the various import formats that it supports. One of those formats is the "MARPLOT Import/Export" format (MIE). LandView can create an MIE file from a dBase/Foxpro database file, as long as the file has fields for latitude and longitude.

The simplest case is the creation of "point" objects, one for each record in your database. The more complicated case involves the creation of "polygon" or "polyline" objects, which requires a second dBase/Foxpro file, called a shape file. For the simple case, leave the shape file name blank, and choose the field names for latitude and longitude from the pull-down lists. Optionally, you can choose a "name" field, which contains the names you want the map objects to have in MARPLOT. You may also choose a color and symbol for the map objects. If you don't choose a color or symbol, the defaults (shown) will be used.

For creating polygons and polylines, you must have a second file (the shape file) containing fields for latitude, longitude, and one or more fields for linking these records with your primary database file. In this case, the field names for latitude and longitude pertain to the shape file rather than the primary file. LandView assumes that all fields in the shape file (besides the latitude and longitude fields) are to be used to match the records, and the corresponding fields should also be in the primary file. There should be multiple records in the shape file for each record in the primary file, each record having a latitude/longitude coordinate for a node or point. The collection of records that matches a primary-file record will comprise the points of a polygon or polyline. If the last coordinate is the same as the first, it will be a polygon; otherwise it will be a polyline.

Once you have entered all necessary values on the screen, press the "OK" button to start the process. When completed, you will receive a message indicating the name of the MIE file. It will have the same name as your database, but with the .MIE extension, and it will be stored in your LandView user directory (usually C:\LV3USER.)

After the file has been created, you can switch to MARPLOT, choose "Import" from the "File" menu, and point to your MIE file.

Note that you must have already performed the [Associate File with Map Layer](#) function, because the MIE file needs to have a layer name and map name for each object. Similarly, your database file needs a 16-character field named IDMARPLOT, which will contain the ID Number to be assigned to each map object. If you leave this field blank, LandView will insert values for you.

Estimate Population Around Current Map Pointer

The "Estimate Population Around Current Map Pointer" function will summarize population statistics centered around the current map pointer for Census Block Groups Centroids or Polygons that fall within a circle of a radius that you specify. Based upon your choice, either the layer "Census Block Group Centroids" or "Census Block Grps-generalized" is used in this procedure.

WARNING: Both of these methods use population data only for the United States. Therefore, users should not use radius distances that cross international boundaries.

The population data estimates can be derived in one of two ways:

The BLOCK GROUP UNIFORM POPULATION DENSITY method (the program default) tallies data for each block group polygon that has any portion of the polygon falling within the radius of the circle, but then prorates the results based on the ratio of the area of the circle to the land area of the block group polygons. This is done to account for the fact that there will be block groups on the circumference of the circle that are only partially within the radius and therefore their population counts need to be apportioned accordingly.

For example, if the area of the circle is half the land area of the block groups (i.e. large parts of the selected block groups are outside of the radius), the tallies for the block groups are halved. Percentages are based upon the prorated tallies. This method works best for small radii, or where only small portions of block group polygons are within the radius. This method assumes a uniform population density throughout the block groups' land area within the circle. For those situations where the ratio is greater than one, the statistics are not prorated.

WARNING: This method may result in an overcount if the circle includes areas where no people live, such as over water or industrial areas. It can result in an undercount for those block groups whose area is only partially inside the radius but whose population is concentrated in the area inside the radius. In summary, the higher the degree of non-uniformity of population density, the higher the degree of uncertainty of the results.

The BLOCK GROUP CENTROID method tallies data only for block group polygons whose centroid falls within the radius of the circle. This method provides a reasonable approximation of the population for radii greater than 1 mile in densely settled areas. Beyond that distance inclusion or exclusion of block groups based on the centroids balances out.

WARNING: For radii smaller than one mile, or in rural areas where block group polygons are very large areas, this method may result in an undercount.

This function is available both from the Map menu, and from the Sharing menu in MARPLOT.

Describe Census Areas at Current Map Pointer

The "Describe Census Areas at Current Map Pointer" function will identify the state, county, tract/bna, and block group at the location of the current map pointer. The system will first attempt to locate a census block group polygon at that location. The block group identification number has within it the identification for state, county, and tract/bna. If a block group polygon cannot be found at that location, the system will attempt to locate a census tract/bna polygon. In LandView, tract/bna polygons are generalized (i.e., some node points that make up the boundary are removed to make them smaller, and faster to display). Therefore, if the current map pointer is near the boundary between two or more tract/bnas, the imprecision of the boundaries may cause you to obtain an invalid result. To avoid this, always use a LandView CD that has block group polygons. Note: the only LandView CD that does not contain block group polygons is the nationwide CD (number 11). CDs 1-10 all contain block group polygons.

This function is available both from the Map menu, and from the Sharing menu in MARPLOT.

LandView™ III Help
Go To Zip Code

This option allows you to quickly find a zip code on the MARPLOT map. If the zip code you choose is found in the [LandView Zip Code database](#), MARPLOT will come forward with the focus point at the center of that zip code. You do **not** have to open the zip code file in order to perform this function.

Match Records to Census Areas

The "Match Records to Census Areas" function matches latitude and longitude coordinate values in the currently-opened file to the Census areas (state, county, tract, and block group) that the coordinates fall within on the MARPLOT map. You can thus determine the demographic characteristics for the locations represented in your file. An example of the use of this feature would be to analyze the poverty level of people living around toxic waste sites. Although you could obtain this information individually for each site (by finding each site on the map, and choosing the [Estimate Population Around Current Map Pointer](#) function, the "Match Records to Census Areas" function would provide a link to the census data for all toxic waste sites in the file, allowing you to perform your own analysis.

The latitude and longitude values in the records must be represented as signed decimal degrees, with negative numbers for southern and western hemispheres. An example of a valid set of coordinates for the central United States is: 39.538875, -98.211403. Although latitude and longitude are numbers, the fields may be of character type. The field name defaults are LATITUDE and LONGITUDE, but you may override those if the field names in the current file are different.

LandView will perform a search in MARPLOT to obtain the Census area ID numbers at the location of each coordinate, and write a new dBase file, identical to the current file, but with the addition of fields for the state, county, tract, and block group. The new file name defaults to MATCHED.DBF, located in the user directory (usually LV3USER). You may override the file name and location by clicking into the file name field and typing a new value.

LandView™ III Help

Getting Started

There are two approaches to using LandView: 1) Inquire into the databases and view the results as selected objects on a map, or 2) inquire into the map and view the results as a selection of database records. These approaches are described below.

1) Inquire into the databases and view the results as selected objects on a map

The first step is to choose a database from the [File Menu](#). If you choose [Census Data](#), you can select the particular Census database from the "Summary Level" radio buttons.

Depending on the database, you will either be in a customized screen, or in the generalized [Browse](#) screen. If you are in a customized screen, you can press the "Browse" button to scroll through the entire database alphabetically. Browsing a database is a good way to find data records if you are not sure of the precise name of the item you are looking for.

You may also choose [Find](#), either from the [Records Menu](#), or by pressing the "Find" button on a customized screen. The Find function will let you enter all or part of a name to search for in the database. The default field to search will be the "Name", although you can choose any other field to search on.

Another way to find data records is by choosing the [Query](#) function, either from the [Records Menu](#), or by pressing the "Query" button on a customized screen. There are three steps to performing a query: 1) choose a field, 2) choose an operator (such as "equals", "greater than", "less than"), 3) enter a value. An example would be "Facility_Name equals Acme". To make a more complex query, choose "and" or "or", and continue with another set of "field, operator, value" choices. When finished, press the "Process" button, and the system will tell you how many records it found that met your criteria. Then press the "Return" button to view the set of data records.

However you manage to find a particular data record, you can show the selected item on the map by choosing [Show on Map](#), either from the [Map Menu](#), or by pressing the "Show on Map" button on a customized screen. If you have performed a query and have a resulting set of records, you may choose "Show All on Map". In either case, the system will bring the [MARPLOT](#) program forward, and the record(s) will be selected (MARPLOT places tiny boxes around the border of selected polygons, or around the symbol of selected point objects.) For polygon objects like States, Counties, and Census Tracts, MARPLOT will zoom in so that the selected object just fits the screen. Whenever "Show All on Map" is chosen, MARPLOT will zoom in or out to fit all the selected objects on the screen.

The [Thematic Mapping](#) function is another way to view database results on the map. Once you have chosen a database from the file menu (or a summary level from the "Census Data" screen), you can choose "Thematic Mapping" either from the [Map Menu](#), or by pressing the "Thematic Mapping" button from a customized screen. This function allows you to set colors, patterns, and symbols for objects on the map, based on values in a database field. For example, you can display counties in various colors based on the median household income.

2) Inquire into the map and view the results as a selection of database records.

Details on making inquiries into the map using [MARPLOT](#) can be found by choosing "Help" from the MARPLOT program. The following is a brief summary of how map objects can be selected in MARPLOT, and how the results can be shown in LandView:

MARPLOT has a tool bar on the left margin. The top-most tool is the arrow, or selection tool. With it, you can click on any map object to select it. You can also drag a rectangle (or a circle with the Ctrl Key pressed) to select all objects within the area you specify. You can also search for map objects by choosing the "Search" option from the "List" menu. The result of a search is a list of objects (search collection) that you can cause to be selected by choosing "Show All on Map".

Whenever you have one or more map objects selected, you can add to the selected set by "Shift-Clicking" additional objects. To view database information on selected map objects, choose "Get Info" from the "LandView Databases" section of the "Sharing" menu. (A shortcut for "Get Info" is to press Ctrl+I). LandView will come forward and provide you with a list of categories (databases or map layers) that were chosen, and how many records were selected in each. Press the "Show Records" button to view the selected database records.

For many of the EPA databases, and all of the Census databases, there is a [Summarize](#) button, which will sum numeric fields for the selected (or queried) record set. Two examples of how this can be used are:

- 1) Select a set of Census Tracts from MARPLOT (perhaps these are Tracts that are within a certain radius of an EPA-regulated facility), choose "Get Info", choose "Show Records" from LandView, and press the "Summarize" button. The population, income, and other demographic data fields will be summed for the selected Tracts, thus giving you the demographic characteristics for a radius around an EPA site.

- 2) Select a set of EPA-regulated facilities (for example, Wastewater Discharge Facilities) from MARPLOT, choose "Get Info", choose "Show Records" from LandView, and press the "Summarize" button. The total amount discharged for each substance will be summed for the selected facilities.

LandView™ III Help

States

States are the primary governmental divisions of the United States. The District of Columbia is treated as a statistical equivalent of a state for census purposes.

The Census Bureau treats the outlying areas as state equivalents for the 1990 census. The outlying areas are American Samoa, Guam, the Northern Mariana Islands, Palau, Puerto Rico, and the Virgin Islands of the United States.

In addition to the fields described in Census Data, the State-Level database (STATES.DBF) includes the following information:

STATE_CODE	C	2
------------	---	---

State FIPS Code

STATE_NAME	C	45
------------	---	----

State Name

STATE_ABV	C	2
-----------	---	---

State Postal Abbreviation

LandView™ III Help

Census Block Groups

A combination of census blocks that is a subdivision of a census tract or BNA. A BG consists of all blocks whose numbers begin with the same digit in a given census tract or BNA; for example, BG 3 within a census tract or BNA includes all blocks numbered between 301 and 399. The BG is the lowest level of geography for which the Census Bureau has tabulated sample data in the 1990 census; it was used to tabulate sample data in the 1970 and 1980 censuses only for those areas that had block numbers.

Census block groups are usually small areas bounded on all sides by visible features such as streets, roads, streams, and railroad tracks, and by invisible boundaries such as city, town, township, and county limits, property lines, and short, imaginary extensions of streets and roads.

Census Block Groups are represented on the MARPLOT map in 3 different layers. The layer "Census Block Groups" contains the full boundaries, and is available only on LandView CDs 1-10. "Census Block Grps-generalized" contains boundaries that are thinned, or less detailed. "Census Block Group Centroids" contains the center points of the block group polygons. The latter 2 layers are on all LandView CDs.

There are some cases where block groups on the map do not match up with block groups records in the database. Crews of vessels, designated by a tract/BNA suffix of .99 were eliminated from the map because they do not represent any land area or any specific area of water. They are used to report statistics about people aboard civilian or military ships. There may be few block groups with no corresponding database record because they have shifted into a new county partition, carrying along with them the previous county's census tract identification which precludes matching to the database.

In addition to fields described in Census Data, the Census Block Group database (CEN_BKLG.DBF) includes the following information:

STATEFP C 2

State FIPS Code

CNTY C 3

County FIPS Code

TRACTBNA C 6

Census Tract/Block Numbering Area Code

BLCKGR C 1

Census Block Group Number

LandView™ III Help
Congressional Districts

Congressional districts (CDs) are the 435 areas from which persons are elected to the U.S. House of Representatives. After the apportionment of congressional seats among the states, based on census population counts, each state is responsible for establishing CDs for the purpose of electing representatives. Each CD is to be as equal in population to all other CDs in the state as practicable, based on the decennial census counts. The CDs that were in effect on January 1, 1990, were those of the 101st Congress. Data on the 101st Congress appear in an early 1990 census data product (Summary Tape File 1A). The CDs of the 101st Congress are the same as those in effect for the 102nd Congress. CDs of the 103rd Congress, reflecting redistricting based on the 1990 census, are summarized in later 1990 data products (STFs 1D and 3D, and 1990 CPH-4, Population and Housing Characteristics for Congressional Districts of the 103rd Congress printed reports).

LandView III has been updated with both data and boundaries for the 105th Congress. Data are shown only for the 50 states and the District of Columbia.

In addition to the fields described in Census Data, the Congressional District-Level database (CON_DIST.DBF) includes the following information:

STATEFP C 2

State FIPS Code

CONG_DIST C 2

Cong. District Number

NAME C 20

Cong. District Name

LandView™ III Help
Minor Civil Divisions

Minor civil divisions (MCDs) are the primary legal subdivision of a county in 28 States, created to govern or administer an area rather than a specific population. The several types of MCDs are identified by a variety of terms, such as town, township, and district, and include both functioning and nonfunctioning governmental units. Many MCDs represent local, general-purpose governmental units, which makes them required areas for presentation of decennial census data.

MCDs represent many different kinds of legal entities, with a wide variety of governmental and/or administrative functions. MCDs are variously designated as American Indian reservations, assessment districts, boroughs, election districts, gores, grants, magisterial districts, parish governing authority districts, plantations, precincts, purchases, supervisors' districts, towns, and townships. In some states, all or some incorporated places are not located in any MCD and thus serve as MCDs in their own right. In other states, incorporated places are subordinate to (part of) the MCDs in which they are located, or the pattern is mixed -- some incorporated places are independent of MCDs and others are subordinate to one or more MCDs.

The MCD database in LandView contains information for the following 20 MCD states where MCDs function as general purpose-governmental units or constitute legal entities: Connecticut, Illinois, Indiana, Iowa, Kansas, Maine, Massachusetts, Michigan, Minnesota, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Vermont, and Wisconsin.

In addition to the fields described in Census Data, the MCD-level database (MCD.DBF) includes the following information:

MCD_CODE C 5

Minor Civil Division Code

MCDNAME C 40

Minor Civil Division Name

STATE_CODE C 2

State FIPS Code

Census Tracts / Block Numbering Areas

Census tracts are small, relatively permanent statistical subdivision of a county in a metropolitan area (MA) or a selected nonmetropolitan county, delineated by a local committee of census data users (a CSAC) for the purpose of presenting decennial census data. Census tract boundaries normally follow visible features, but may follow governmental unit boundaries and other nonvisible features in some instances; they always nest within counties. Designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions at the time the CSAC established them, census tracts usually contain between 2,500 and 8,000 inhabitants. They may be split by any subcounty geographic entity.

The spatial size of census tracts varies widely depending on the density of settlement. Census tract boundaries are delineated with the intention of being maintained over a long time so that statistical comparisons can be made from census to census. However, physical changes in street patterns caused by highway construction, new development, etc., may require occasional revisions; Census tracts occasionally are split due to large population growth, or combined as a result of substantial population decline.

Block Numbering Areas (BNAs) are geographic entities similar to census tracts, and delineated in counties (or the statistical equivalents of counties) without census tracts. Both census tracts and block numbering areas define a set of small geographic areas for the enumeration, tabulation and publication of census data. To facilitate data processing and publications, the Census Bureau identifies census tracts and BNAs by number rather than name. Each census tract has a basic census tract number composed of no more than four digits and may have an optional two-digit decimal suffix. (Leading zeroes appear in electronic media products, but do not appear on the Census Bureau maps or in the printed reports.) All BNAs have a four-digit basic number and may have an optional two-digit decimal suffix. The Census Bureau uses the numbers 1 to 9499.99 to identify census tracts, and 9501 to 9989.99 to identify BNAs.

In addition to the fields described in Census Data, the Census Tract database (CEN_TRAC.DBF) includes the following information:

STATEFP C 2

State FIPS Code

CNTY C 3

County FIPS Code

TRACTBNA C 6

Census Tract/Block Numbering Area Code

MALE_LT_1

Number of males under 1 year old

MALE_1_2

Number of males 1-2 years old

MALE_3_4

Number of males 3-4 years old

MALE_5

Number of males 5 years old

MALE_6

Number of males 6 years old

MALE_7_9

Number of males 7-9 years old

MALE_10_11

Number of males 10-11 years old

MALE_12_13

Number of males 12-13 years old

MALE_14

Number of males 14 years old

MALE_15

Number of males 15 years old

MALE_16

Number of males 16 years old

MALE_17

Number of males 17 years old

MALE_18

Number of males 18 years old

MALE_19

Number of males 19 years old

MALE_20

Number of males 20 years old

MALE_21

Number of males 21 years old

MALE_22_24

Number of males 22-24 years old

MALE_25_29

Number of males 25-29 years old

MALE_30_34

Number of males 30-34 years old

MALE_35_39

Number of males 35-39 years old

MALE_40_44

Number of males 40-44 years old

MALE_45_49

Number of males 45-49 years old

MALE_50_54

Number of males 50-54 years old

MALE_55_59

Number of males 55-59 years old

MALE_60_61

Number of males 60-61 years old

MALE_62_64

Number of males 62-64 years old

MALE_65_69

Number of males 65-69 years old

MALE_70_74

Number of males 70-74 years old

MALE_75_79

Number of males 75-79 years old

MALE_80_84

Number of males 80-84 years old

MALE_85_UP

Number of males 85 years and older

FEM_LT_1

Number of females under 1 year old

FEM_1_2

Number of females 1-2 years old

FEM_3_4

Number of females 3-4 years old

FEM_5

Number of females 5 years old

FEM_6

Number of females 6 years old

FEM_7_9

Number of females 7-9 years old

FEM_10_11

Number of females 10-11 years old

FEM_12_13

Number of females 12-13 years old

FEM_14

Number of females 14 years old

FEM_15

Number of females 15 years old

FEM_16

Number of females 16 years old

FEM_17

Number of females 17 years old

FEM_18

Number of females 18 years old

FEM_19

Number of females 19 years old

FEM_20

Number of females 20 years old

FEM_21

Number of females 21 years old

FEM_22_24

Number of females 22-24 years old

FEM_25_29

Number of females 25-29 years old

FEM_30_34

Number of females 30-34 years old

FEM_35_39

Number of females 35-39 years old

FEM_40_44

Number of females 40-44 years old

FEM_45_49

Number of females 45-49 years old

FEM_50_54

Number of females 50-54 years old

FEM_55_59

Number of females 55-59 years old

FEM_60_61

Number of females 60_61 years old

FEM_62_64

Number of females 62-64 years old

FEM_65_69

Number of females 65_69 years old

FEM_70_74

Number of females 70-74 years old

FEM_75_79

Number of females 75-79 years old

FEM_80_84

Number of females 80_84 years old

FEM_85_UP

Number of females 85 years and older

LandView™ III Help

Counties

The primary political divisions of most states are termed "counties." In Louisiana, these divisions are known as "parishes." In Alaska, which has no counties, the county equivalents are the organized "boroughs" and the "Census areas" that are delineated for statistical purposes by the State of Alaska and the Census Bureau. In four states (Maryland, Missouri, Nevada, and Virginia), there are one or more cities that are independent of any county organization and thus constitute primary divisions of their states. These cities are known as "independent cities" and are treated as equivalent to counties for statistical purposes. That part of Yellowstone National Park located in Montana is treated as a county equivalent. The District of Columbia has no primary divisions, and the entire area is considered equivalent to a county for statistical purposes.

In addition to the fields described in Census Data, the County-Level database (COUNTIES.DBF) includes the following information:

STATE_CODE	C	2
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State FIPS Code

COUNTY_CD	C	3
-----------	---	---

County FIPS Code

COUNTY_NM	C	36
-----------	---	----

County Name

LandView™ III Help

Places

Places, for the reporting of decennial census data, include census designated places and incorporated places. Census designated places (CDPs) are delineated for the decennial census as the statistical counterparts of incorporated places. CDPs comprise densely settled concentrations of population that are identifiable by name, but are not legally incorporated places. Their boundaries, which usually coincide with visible features or the boundary of an adjacent incorporated place, have no legal status, nor do these places have officials elected to serve traditional municipal functions. CDP boundaries may change with changes in the settlement pattern; a CDP with the same name as in previous censuses does not necessarily have the same boundaries.

To qualify as a CDP for the 1990 census, an unincorporated community must have met population-based criteria, which vary by state.

Hawaii is the only state with no incorporated places recognized by the Bureau of the Census. All places shown for Hawaii in the data products are CDPs. By agreement with the State of Hawaii, the Census Bureau does not show data separately for the city of Honolulu, which is coextensive with Honolulu County.

Places are represented on the MARPLOT map by two different layers, Places (the actual place boundary or polygon), and Place Centroids (a point near the center of the place polygon). LandView CD #11 contains only the Place Centroids layer, while CDs #1-10 contain both layers. A place centroid is not necessarily in the center of the place, because the location is calculated based on the legal limits or boundaries. Some cities have annexed large areas, or may include offshore islands, and that could cause the place centroid coordinate to be outside the downtown area. For example, the legal limits of San Francisco include the Farallon Islands, causing the place centroid to be in the water.

In addition to the fields described in Census Data, the Place-Level database (PLACES.DBF) includes the following information:

STATEFP C 2

State FIPS Code

PLACEFP C 5

Place FIPS Code

PLACE_NAME C 60

Place Name

ST_COUNTYP C 5

State and County FIPS Codes

Metropolitan Statistical Areas

Metropolitan Area is a collective term, established by the Federal OMB and used for the first time in 1990, to refer to metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs).

Metropolitan statistical areas (MSAs) are relatively freestanding Metropolitan Areas and are not closely associated with other MAs. The general concept of a metropolitan area is one of a large population nucleus, together with adjacent communities that have a high degree of economic and social integration with that nucleus. Some MAs are defined around two or more nuclei. MAs that are designated as MSAs are typically surrounded by non-metropolitan counties.

In addition to the fields described in Census Data, the MSA-Level database (MSA.DBF) includes the following information:

MSA_CODE C 4

Metropolitan Statistical Area Code

MSA_NAME C 55

Metropolitan Statistical Area Name

STATES C 25

State Abbreviations where MSA located

Native American Indian Reservations

Federal American Indian reservations are areas with boundaries established by treaty, statute, and/or executive or court order, and recognized by the Federal Government as territory in which American Indian tribes have jurisdiction.

In addition to the fields described in Census Data, the Indian-Level database (INDIAN.DBF) includes the following information:

IR_CODE C 4

Indian Reservation Code

IR_NAME C 60

Metropolitan Statistical Area Name

STATEFP C 2

State FIPS Code

LandView™ III Help
Alaskan Native Regions

Alaska Native villages (ANVs) constitute tribes, bands, clans, groups, villages, communities, or associations in Alaska that are recognized pursuant to the Alaska Native Claims Settlement Act of 1972, Public Law 92-203. Because ANVs do not have legally designated boundaries, the Census Bureau has established Alaska Native village statistical areas (ANVSAs) for statistical purposes.

In addition to the fields described in Census Data, the Alaska Native-Level database (AK_NATIV.DBF) includes the following information:

AK_CODE C 4

ANVSA Code

AK_NAME C 60

Name of ANVSA

LandView™ III Help
MARPLOT

MARPLOT is the mapping application for LandView III. It is a separate program from the LandView database program. When you start LandView III, MARPLOT is also started; you thus have two applications running simultaneously.

MARPLOT has its own set of help screens. Therefore, in order to obtain detailed instructions on using MARPLOT, choose "Help" from the MARPLOT application.

You can enter the [MARPLOT Help](#) now (This option is not available on the Macintosh). To return to the LandView Help, click the "History" button (or choose "History" from the Options menu) and select any LandView entry.

LandView™ III Help

Summarize

The "Summarize" button is on the Census data screen, and on the various EPA data screens. Its purpose is to sum the numeric fields to give you totals for a selected subset of records. This button is active when a query has been performed, and you therefore have a subset of records to operate on. It is also active when you have selected map objects from MARPLOT, and have chosen "Get Info" from the "LandView Databases" section of the "Sharing Menu".

The following are several examples of how the "Summarize" function can be used:

You can do a query for counties that have over 60% minority population, and summarize to get the total number of persons, by race and age, living in those counties.

You could select a collection of wastewater discharge facilities from MARPLOT, choose "Get Info", and summarize the records to get the total amounts discharged by those facilities.

Similarly, you could select a collection of Census Tracts from MARPLOT, and summarize to get the population statistics of all the people living in that entire area.

Geographic Names Information System

Data in LandView for schools, hospitals, churches, and cemeteries comes from the Geographic Names Information System (GNIS), a CD-ROM publication of the U.S. Geological Survey. GNIS contains geographic names for all known places, features, and areas in the United States that are identified by proper name. Each name is located by geographic coordinates and map source reference. The GNIS contains records on almost 2 million geographic feature names in the United States - from populated places, schools, reservoirs, and parks, to streams, valleys, springs, and ridges. The entries are sorted alphabetically by feature name. Each entry will include the official name of the feature; the feature type; the status of the name as viewed by the U.S. Board on Geographic Names; the county in which the feature is located; and geographic coordinates in degrees, minutes, and seconds that locate the approximate center of an area or feature.

Adding your own files to the "Other Files" menu

Files in the xbase (dBase/Foxpro) format may be added to the "Other Files" sub-menu. These files may be those of your own creation, using the [New](#) option in LandView, or files that you have obtained or created elsewhere. While you can access those files by using the [Open](#) option, it is usually more convenient to have a menu option as a way to access the file.

The file MENU.TXT contains the information that LandView uses to set up the "File" menu. The first 8 items make up the main file choices. Any items after the 8th make up the choices in the "Other Files" menu. By altering the order of the items in MENU.TXT, or by deleting items, you can correspondingly alter the LandView "File" and "Other Files" menus.

In order to add a file to the ["Other Files"](#) sub-menu, you must add the file name and description to the text file MENU.TXT, located in the main LandView directory (usually \LV3"). Type the file description (this is the name that will appear in the "Other Files" sub-menu), followed by a comma, followed by the full path to the file. Example:

My New File,C:\FILES\MYFILE.DBF

If you want your new file to be at the top of the "File" menu, rather than in the "Other Files" menu, simply put your file entry at the top of MENU.TXT.

The current MENU.TXT file is listed below for reference. Note that in place of a drive letter, a question mark can be used to tell LandView to search all disk drives for the file. All of the files listed below are on the LandView III CD-ROM, and the CD drive letter can vary from machine to machine. The additional information for the first 8 files are for internal LandView use, and can be ignored for entries that you add.

Listing of File MENU.TXT:

```
Census Data,POPULATN.SPR,MENU_HIT,LEN(PATH_GEO)=0
Air Facilities,AIR_FACL.SPR,MENU_HIT,LEN(PATH_AIR)=0
Hazardous Waste Facilities (RCRA BRS),BRS.SPR,MENU_HIT,LEN(PATH_BRS)=0
Superfund NPL Sites,CERCNPL.SPR,MENU_HIT,LEN(PATH_NPL)=0
Superfund Non-NPL Sites,CERCNNPL.SPR,MENU_HIT,LEN(PATH_CER)=0
Superfund - No Longer of Concern,CERCNFA.SPR,MENU_HIT,LEN(PATH_NFA)=0
Toxic Release Inventory Facilities,TRI.SPR,MENU_HIT,LEN(PATH_TRI)=0
Wastewater Discharge Facilities (PCS),PCS.SPR,MENU_HIT,LEN(PATH_PCS)=0
EPA Air Quality Monitoring Database,?:\DATA\EPA\AIR_QUAL.DBF
Index of Watershed Indicators,?:\DATA\EPA\HYDRO_3.DBF
Ozone Non-attainment Areas,?:\DATA\EPA\N_ATTAIN.DBF
Brownfields Pilots,?:\DATA\BROWNFLD\BRWNFLDP.DBF
Airports,?:\DATA\DOT\AIRPORTS.DBF
Dams,?:\DATA\COE\DAMS.DBF
Nuclear Sites,?:\DATA\NRC\NRCSITES.DBF
Canadian Places,?:\DATA\CANADA\CANPLACE.DBF
Mexican Places,?:\DATA\MEXICO\MEXPLACE.DBF
Schools,?:\DATA\USGS\SCHOOLS.DBF
Hospitals,?:\DATA\USGS\HOSPITAL.DBF
Religious Institutions,?:\DATA\USGS\RELIGIOU.DBF
Cemeteries,?:\DATA\USGS\CEMETERY.DBF
Zip Codes,?:\DATA\CENSUS\ZIP_CODE.DBF
```


LandView™ III Help
Digital Chart of the World

The Digital Chart of the World (DCW) is a comprehensive 1:1,000,000-scale vector basemap of the world. It consists of cartographic, attribute, and textual data stored on CD-ROMs and is provided with software that permits the database to be accessed, queried, and displayed on PC-class computers. The primary source for the database is the U.S. Defense Mapping Agency (DMA) Operational Navigation Chart (ONC) series. This is the largest-scale unclassified map series in existence that provides consistent, continuous global coverage of essential basemap features. It is expected that future editions of the DCW will not use the ONC series, but instead will utilize the geographic information extracted through DMA's Digital Production System (DPS).

The DCW is designed for a wide range of military, scientific, and educational applications. The DCW database is topologically structured and is suitable either for direct access from the CD-ROM or for offloading and use on workstations and mainframe computers operating complex analytical and display software, including systems with full Geographic Information System (GIS) capabilities. Most of those who offload the DCW in this manner will need to translate the format of the data for compatibility with their own systems.

The DCW can be used as a stand-alone product, allowing the display of the data derived from the ONCs. It can, as well, interface with other compatible digital data. The DCW database may be used as the geographic framework or basemap for the overlay and display of thematic and topical data for regional, continental, and global analysis.

The DCW has been developed in consonance with a new GIS data format known as the Vector Product Format (VPF), which is a U.S. Department of Defense Military Standard (MIL STD). DMA will use VPF for future digital vector products developed at a variety of scales. The VPF has also been adopted into an international spatial data standard known as the Digital Geographic Information Exchange Standard (or DIGEST). In addition, the entire DCW CD-ROM set has been developed in conformance with ISO-9660, the international logical format standard for the production of CD-ROMs.

The DCW has been developed by the agencies that produce the ONC map series: the United States Defense Mapping Agency, the Australian Army Survey Directorate, the Canadian Directorate of Geographic Operations, and the United Kingdom Military Survey. They were supported in the DCW design process by more than forty participating agencies.

The total size of the DCW is approximately 1600 MB. Each disc contains approximately 400 MB. The 4 discs divide the worldwide coverage into 4 regions: (1)North America, (2)Europe/Northern Asia, (3)South American/Africa/Antarctica, and (4) Southern Asia/Australia. The data are organized into 17 thematic coverages, including, political boundaries and ocean coast lines, cities, transportation networks, drainage, land cover, and elevation contours. The DCW also contains a worldwide index of place names with more than 100,000 entries.

The DCW database is in the public domain and, therefore, can be used by anyone.

DCW DEVELOPMENT AND SOURCES OF DATA

The DCW product was designed through a prototyping process that involved four prototypes. More than 75 reviewers participated in the prototyping process, providing comments on one prototype's data content and software for incorporation in the next prototype. The prototypes also served as the testbed for the standards developed during the project.

The ONCs represent the primary data source. The data for Antarctica are from JNCs. The aeronautical data are from the Digital Aeronautical Flight Information File (DAFIF) issued May 2, 1990 by DMA. (However, this product SHALL NOT BE USED FOR NAVIGATION OR ACCURATE POSITIONING.) The vegetation data for North America are derived from NASA's Advanced Very High Resolution Radar (AVHRR) satellite imagery. Road and railroad data for urban areas were compiled from larger-scale sources.

This database contains some British Crown copyright data, which is reproduced with the permission of the Controller of Her Britannic Majesty's Stationery Office. These data, in their DCW form, may be freely reproduced and adapted.

The DCW was developed for DMA by Environmental Systems Research Institute, Inc. (ESRI) on Contract DMA600-89-C-0023. DCW subcontractors included Loral Defense Systems - Akron, Ohio; GEOVISION, Inc. of Norcross, Georgia; Chicago Aerial Survey of Des Plaines, Illinois; Aerial Information Systems of Redlands, California; Philips and DuPont Optical/Disk Manufacturing, Inc. of Wilmington, Delaware; and Geocode of Eau Claire, Wisconsin.

Three other contractors are working directly for government agencies in systems engineering review roles for the DCW. These are SAIC Corp. of McLean, Virginia (directly supporting DMA); IDON Corp. of Ottawa, Ontario (directly supporting the DGO of the Canadian DND); and Smith and Associates of the United Kingdom (directly supporting the United Kingdom Military Survey).

DATA QUALITY

Data quality information is available at three levels of detail. Aspects of data quality associated with the production process are described at the library level. The Data Quality layer, at the coverage level, provides information about individual source charts, such as date and absolute horizontal and vertical accuracy. Additional data quality information for some features is carried as attributes of those features.

FOR FURTHER INFORMATION

The Military Specification - Digital Chart of the World Database (MIL-D-89009) provides information on the content and organization of the DCW database. It provides enough detail to allow a user to determine if the DCW is useful for a specific application. The following documents provide additional information:

- Military Standard - Vector Product Format (MIL-STD-600006)
- Development of the Digital Chart of the World

The Military Specification - Digital Chart of the World Database and Military Standard - Vector Product Format can be obtained from the Naval Publications and Forms Center, 5801 Tabor Ave., Philadelphia, PA 19120-5099.

The Development of the Digital Chart of the World, which concerns the history of the DCW project, can be obtained from the U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Rd., Springfield, VA 22161.

Information regarding the DCW production process can be obtained from ESRI, Inc., 380 New York Street, Redlands, CA 92373, Attention: Duane Niemeyer.

Information regarding the CD-ROM production process used in creating the DCW can be obtained from GEOVISION, Inc., 5680 Peachtree Parkway, Norcross, GA 30092, Attention: Kenneth S. Shain.

Users should refer corrections, additions, and comments for improving this product to:

Director, Defense Mapping Agency
Attn: PR
8613 Lee Highway
Fairfax, VA 22031-2137

LandView™ III Help

Technical Notes

The minimum configuration required to run this CD-ROM:

PC with a 486-class processor, or Macintosh with a 68020 processor,
8MB of RAM,
10MB of free hard disk space,
VGA color display,
2X CD-ROM drive,
Windows 3.1 (for PC), System 7.0 (for 68K Mac), System 7.1.2 (for Power Mac)

To maximize performance the recommended configuration is:

PC with 586 or Pentium-class processor, or Macintosh with PowerPC processor,
16 MB RAM
SVGA color display
4X CD-ROM drive
Windows 95 or Windows NT (for PC), System 7.1.2 or higher (for Macintosh)

Map Projections

The map projection used by the MARPLOT mapping engine of LandView is called Plate Carrée. This is a conventional cylindrical projection . The meridians are true-length straight lines, parallel to each other. The parallels and the equator are also straight lines, perpendicular to the meridians. The mapping cylinder is assumed tangent to the sphere. The distortion in length along the parallels is extreme as one goes poleward. The convergency is ignored, and the poles are stretched into straight lines. (This description of the Plate Carrée projection is taken from "Map Projections: Theory and Applications" by Frederick Pearson II, CRC Press, Boca Raton, Florida, 1990.)

This projection is used in MARPLOT because of its simplicity, which promotes speed of drawing. MARPLOT does not provide conversion to other projections.

LandView Error when CD-ROM reader empty

When the LandView program is started, you will get an error message if your CD-ROM reader does not have a CD in it. You can usually press "Cancel" (several times may be required) to get past the error message. To avoid this error, always keep a CD (any CD will do) in the reader.

The LandView User Directory

LandView creates a directory named "LV3USER" on the C: drive, where various system control files are kept. Saved queries and thematic mapping sets are also saved here. To specify another name or location for the user directory (Windows users only), specify a DOS environment parameter LVUSER=, followed by the drive and path .

Re-installing LandView

If you ever have a need to re-install LandView, you should be able to do so without first deleting the existing LandView files. However, if the re-installed system does not operate properly, it is recommended that you delete any existing LandView directories (LV3 and LV3USER), and try installing again.

LandView™ III Help
Census Glossary

ACG See Address Coding Guide.

Active governmental unit A governmental unit that has elected or appointed officials, raises revenues, and performs governmental activities (such as enactment of laws, provision of services, and entering into contracts). See also functional status (governmental), functioning governmental unit, inactive governmental unit, nonfunctioning governmental unit.

Address The number or other designation assigned to a housing unit, business establishment, or other structure for purposes of mail delivery, emergency services, and so forth. See also city-style address, general delivery address, post office box address, rural address.

Address coding guide (ACG) A computerized inventory of street names, address ranges, and census block numbers, created by the Census Bureau in cooperation with local agencies, to permit the automated assignment of addresses on a mailing list to the geographic entity codes for the 145 largest urban cores of metropolitan areas (MAs) at the time of the 1970 census. Each file contained the name of each block side that was a street or road, its associated address range and ZIP Code, and 1970 census geographic entity information for that side of the street. It was the forerunner of the GBF/DIME-Files and the TIGER data base. See also GBF/DIME-File, TIGER data base.

Address Reference File (ARF) A series of computerized files containing street and building records used to geocode the economic censuses. The files show, by ZIP Code, the low and high addresses associated with each street name within incorporated places of 2,500 or more population, special economic urban areas (SEUAs) of 10,000 or more population, balances of counties, and balances of (S)MSAs.

Address register area (ARA) A geographic entity established by the Census Bureau for 1990 census data collection purposes. It usually consists of a census tract or block group. See also enumeration district, tape address register.

Adjacent A term descriptive of geographic entities that are next to each other and share all or a portion of a common boundary. See also conjoint, contiguous, jump, jump corridor, merger.

Administrative entity A geographic area, usually with legally defined boundaries but often without elected officials, created to administer elections and other governmental functions. Administrative areas include school districts, voting districts, ZIP Codes, and nonfunctioning MCDs such as election precincts, election districts, and assessment districts. See also governmental unit, legal entity, minor civil division, statistical entity.

Agriculture (census) See census of agriculture.

AIANA See American Indian and Alaska Native area.

AIANA code A four-digit number assigned by the Census Bureau to identify AIANAs for data processing and tabulation during the 1990 census; AIANA codes range from 0001 through 4989. A five-digit FIPS code used to identify each AIANA (or portion of an AIANA) within a State. See also Geographic Identification Code Scheme, Federal Information Processing Standards.

Alaska Native For decennial census purposes, includes people who report their race as Aleut or Eskimo as well as those who report race entries such as Alutiiq, Egegik, Pribilovian, Arctic Slope, Inupiat, and Yupik.

Alaska Native Claims Settlement Act (ANCSA) Legislation enacted in 1972 establishing 13 ANRCs to conduct business and nonprofit activities by and for Alaska Natives. See also Alaska Native Regional Corporation, Alaska Native village, Alaska Native village statistical area.

Alaska Native Regional Corporation (ANRC) A corporate entity established by the ANCSA. Twelve ANRCs have specific boundaries that together cover the State of Alaska except for the Annette Islands Reserve (an American Indian reservation). A thirteenth corporation represents Alaska Natives not resident in Alaska who do not identify with any of the other 12 corporations. See also Alaska Native Claims Settlement Act, Alaska Native village, Alaska Native village statistical area.

Alaska Native village (ANV) A type of local governmental unit found in Alaska, with boundaries identified for the Census Bureau by an appropriate authority, that constitutes an association, band, clan, community, group, tribe, or village recognized pursuant to the ANCSA. The Census Bureau tabulated statistical data for ANVs for the 1980 census. ANVs do not have legally defined boundaries. See also Alaska Native Claims Settlement Act, Alaska Native village statistical area.

Alaska Native village statistical area (ANVSA) A 1990 census statistical entity that represents the densely settled extent of an ANV as delineated for the Census Bureau by officials of the ANRC in which the ANVSA is located, or by other appropriate officials, for the purpose of presenting decennial census data. See also Alaska Native Regional Corporation, Alaska Native village.

Aldea A closely settled population center delineated by Puerto Rico officials as the equivalent of a CDP for decennial censuses before 1990. The term was replaced by *comunidad* for the 1990 census. See also census designated place, *comunidad*.

American Indian A person who identifies herself or himself as being in the racial classification of an American Indian for decennial census purposes.

American Indian and Alaska Native area (AIANA) A Census Bureau term referring to these entity types: American Indian reservation, American Indian subreservation area, American Indian trust land, tribal jurisdictional statistical area, tribal designated statistical area, Alaska Native Regional Corporation, Alaska Native village, and Alaska Native village statistical area.

American Indian reservation An American Indian entity with boundaries established by treaty, statute, and/or executive or court order. Federal and individual State governments have established reservations as territory over which American Indians have governmental jurisdiction. These entities are designated as colonies, communities, pueblos, rancherias, reservations, and reserves. The Federally recognized reservations, their names, and their boundaries are identified for the Census Bureau by the Bureau of Indian Affairs (BIA), an agency in the U.S. Department of the Interior; State governments identify the names and boundaries of State reservations.

American Indian subreservation area An administrative subdivision of an American Indian reservation, known as an area, chapter, community, district, or segment. These entities are internal units of self-government or administration that serve social, cultural, and/or economic purposes for the American Indians on the reservation. Subreservation areas may lie wholly or partially within an American Indian reservation; a few are located entirely outside any reservation (off-reservation). Tribal governments identified and delineated subreservation areas for the Census Bureau for the 1980 decennial census, the only census in which the Census Bureau has tabulated data for these areas.

American Indian trust land Land held in trust by the Federal government for either a tribe (tribal trust land) or an individual member of that tribe (individual trust land). Such land always is associated with a specific Federally recognized reservation or tribe, but may be located on or off the reservation. The Census Bureau recognizes and tabulates data separately only for off-reservation trust lands. The BIA identifies and provides maps of these areas for use by the Census Bureau.

Analysis unit (AU) A small geographic area consisting of one or more contiguous census blocks, created by the Census Bureau to evaluate their land area and population density and to determine if they should be included in a UA area or extended city. See also extended city, urbanized area.

ANCSA See Alaska Native Claims Settlement Act.

Annex To add territory to a governmental unit, usually an incorporated place, by an ordinance, a court order, or other legal action. See also detach.

Annexation The act or process of adding land to a governmental unit, usually an incorporated place, by an ordinance, a court order, or other legal action.

ANRC See Alaska Native Regional Corporation.

ANV See Alaska Native village.

ANVSA See Alaska Native village statistical area.

ARA See address register area.

Area measurement The determination of the extent of surface area, expressed in square miles and/or square kilometers, of land and/or water within a predetermined boundary. Formerly accomplished by measuring on a correctly scaled map, area measurements for the 1990 census were calculated by computer based on the locations of features and boundaries in the TIGER data base.

Assessment district A nonfunctioning MCD defined only to administer tax assessments for a county. For the 1990 census, the Census Bureau recognized assessment districts as MCDs only in Anne Arundel County, Maryland.

AU See analysis unit.

Barrio A nonfunctioning legal subdivision of a municipio in Puerto Rico, treated as an MCD by the Census Bureau. A barrio (or group of barrios) is the area from which municipio officials and the Commonwealth legislature are elected. See also barrio-pueblo, ciudad, county subdivision, nonfunctioning government.

Barrio-pueblo A nonfunctioning legal subdivision of a municipio in Puerto Rico, treated as an MCD by the Census Bureau. The barrio-pueblo replaces the pueblo reported in decennial censuses prior to 1990. The barrio-pueblo is differentiated from other barrios because it is the historical center and seat of government of its municipio. See also barrio, county subdivision, pueblo.

BAS See Boundary and Annexation Survey.

Beat The former term for a supervisor's district (MCD) in Mississippi; an MCD in Alabama before the establishment of CCDs. See also minor civil division, supervisor's district.

BG See block group.

BIA See Bureau of Indian Affairs.

Block See census block.

Block boundary A census map feature, visible or nonvisible, that delimits a census block. Usually, it takes two or more features to delimit a census block, but a single feature may delimit a census block in the case of an island or a circumferential street.

Block group (BG) A combination of census blocks that is a subdivision of a census tract or BNA. A BG consists of all blocks whose numbers begin with the same digit in a given census tract or BNA; for example, BG 3 within a census tract or BNA includes all blocks numbered between 301 and 399. The BG is the lowest level of geography for which the Census Bureau has tabulated sample data in the 1990 census; it was used to tabulate sample data in the 1970 and 1980 censuses only for those areas that had block numbers. See also block number, enumeration district, sample data.

Block number A three-digit number, which may have a one- or two-letter alphabetic suffix for the 1990 census, that identifies a specific census block on census maps and Summary Tape Files (STFs). Block numbers are not repeated within a census tract or BNA.

Block numbering area (BNA) An area delineated by State officials or (lacking State participation) by the Census Bureau, following Census Bureau guidelines, for the purpose of grouping and numbering decennial census blocks in counties or statistically equivalent entities in which census tracts have not been established. A BNA is equivalent to a census tract in the Census Bureau's geographic hierarchy. See also block numbering area number, census tract.

Block numbering area (BNA) number A four-digit number, possibly with a two-digit suffix, used to identify a BNA within a county. BNA numbers range from 9501 to 9989.

Block side The section of a feature drawn on a Census Bureau map that has a single name and defines one boundary of a census block; for example, one side of Main Street from First Street to Second Street.

BNA See block numbering area.

Borough In Alaska, the type of governmental unit that is the primary legal subdivision of the organized portion of the State, similar to a county in other States. In New York, a functioning MCD; the boroughs are the five entities, one for each county, that together constitute New York city. In Connecticut, New Jersey, and Pennsylvania, an incorporated place; in New Jersey and Pennsylvania, also a county subdivision. See also census area, census subarea, county subdivision, dependent place, incorporated place, independent place, unorganized borough.

Boundary A line, which may or may not follow a visible feature, that defines the limits of a geographic entity such as a block, BNA, census tract, county, or place. See also nonvisible feature, visible feature.

Boundary and Annexation Survey (BAS) A Census Bureau survey of a specified universe of counties (and legally equivalent entities), MCDs, and incorporated places. The purpose of the BAS is to determine the inventory of legally defined entities and the correct names, political descriptions, and legal boundaries of counties, MCDs, and incorporated places as of January 1 of the year of the survey. The survey also collects specific information on the legal actions that effect boundary changes.

Bureau of Indian Affairs (BIA) The Federal Government agency, located in the Department of the Interior, responsible for the historic and legal relationships between the Federal Government and American Indian communities.

CBD See central business district.

CCD See census county division.

CD See congressional district.

CDP See census designated place.

CD-ROM See compact disc read-only memory.

Census A complete enumeration, usually of a population, but also businesses and commercial establishments, farms, governments, and so forth. See also census of agriculture, census of governments, decennial census, economic census, sample, survey.

Census area The statistical equivalent of a county in Alaska. Census areas are delineated cooperatively by the State of Alaska and the Census Bureau for statistical purposes in the portion of Alaska not within an organized borough; they were used first in the 1980 census. See also borough, census subarea, unorganized borough.

Census block The smallest entity for which the Census Bureau collects and tabulates decennial census information; bounded on all sides by visible and nonvisible features shown on Census Bureau maps. See also collection block, 100-percent data, tabulation block.

Census county division (CCD) A statistical subdivision of a county, established cooperatively by the Census Bureau and State and local government authorities, for the presentation of decennial census data in 21 States that do not have well-defined MCDs; that is, where MCDs have not been legally established, do not serve a legal or administrative governmental purpose, are not well known, have poorly defined boundaries, and/or have frequent boundary changes. A CCD boundary normally follows visible features and county lines, but may follow corporate boundaries and other nonvisible features in selected instances. See also census subarea, county subdivision, civil division.

Census designated place (CDP) A statistical entity, defined for each decennial census according to Census Bureau guidelines, comprising a densely settled concentration of population that is not within an incorporated place, but is locally identified by a name. CDPs are delineated cooperatively by State and local officials and the Census Bureau, following Census Bureau guidelines. These entities were called unincorporated places for the 1940 through 1970 censuses. See also aldea, comunidad, whole-town CDP, zona urbana.

Census division See division (census geographic).

Census geography A collective term referring to the geographic entities used by the Census Bureau in its data collection and tabulation operations, including their structure, designations, and relationships to one another.

Census map Any map produced by the Census Bureau that displays the geographic entities used in a Census Bureau census or survey.

Census of agriculture An enumeration of the Nation's farms, farm population, and agricultural production, conducted by the Census Bureau every five years, in years ending in 2 and 7. See also economic census.

Census of governments An enumeration of all general-purpose governmental units such as States, counties, municipalities, towns and townships, plus limited-purpose local governments (school district governments and special district governments such as housing authorities, and bridge and toll facilities). The Census Bureau conducts the census of governments every five years, in years ending in 2 and 7.

Census region See region (census geographic).

Census statistical areas committee (CSAC) A committee established by local officials and other interested individuals to identify, in cooperation with the Census Bureau, the census tracts, CDPs, and other statistical entities for a county. Referred to as a census tract committee until 1973. See also census statistical areas key person.

Census statistical areas key person (CSAKP) A person designated by the CSAC to act as its contact person with the Census Bureau. Referred to as a census tract key person until 1973. See also census statistical areas committee.

Census subarea (CSA) A statistical division of a borough or census area in Alaska, equivalent to a CCD in other States. Census subareas are delineated cooperatively by officials from Alaska and the Census Bureau. See also borough, census area, census county division.

Census subdistrict A nonfunctioning MCD equivalent in the Virgin Islands of the United States. Census subdistricts were legally defined by the Virgin Islands legislature for the 1980 census.

Census tract A small, relatively permanent statistical subdivision of a county in a metropolitan area (MA) or a selected nonmetropolitan county, delineated by a local committee of census data users (a CSAC) for the purpose of presenting decennial census data. Census tract boundaries normally follow visible features, but may follow governmental unit boundaries and other nonvisible features in some instances; they always nest within counties. Designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions at the time the CSAC established them, census tracts usually contain between 2,500 and 8,000 inhabitants. They may be split by any subcounty geographic entity. See also block numbering area, census statistical areas committee, census tract number, central business district.

Census tract committee See census statistical areas committee.

Census tract key person (CTKP) See census statistical areas key person.

Census Tract Manual A Census Bureau publication that described the steps a local census tract committee had to follow when it developed a census tract plan. The first edition was published in 1934; the last, in 1966. See also census statistical areas committee, Geographic Areas Reference Manual.

Census tract number A four-digit number, possibly with a two-digit suffix, used to identify a census tract. Census tract numbers are always unique within a county and usually unique within an MA. Almost all census tract numbers range from 0001 to 9499. Leading zeros are not shown on the Census Bureau's maps or in its printed reports.

Census Tract/Block Numbering Area Outline Map A map (or set of maps) depicting the boundaries and numbers of census tracts/BNAs in a county or equivalent entity. The map also displays features and feature names underlying the boundaries, and the boundaries and names of counties, AIANAs, county subdivisions, and places (but not the street pattern within census tracts/BNAs). Each map sheet is approximately three feet by four feet in size.

Central business district (CBD) The commercial center of an MA central city or other MA city with a population of 50,000 or more, recognized for tabulating statistical data in the 1948 through 1982 economic censuses, and in the 1950 to 1980 decennial censuses. A CBD was defined as an area of very high land valuation and high traffic flow, characterized by a high concentration of retail and service businesses. CBDs usually consisted of one or more whole census tracts; in the few cases where a CBD tract extended beyond the city limits, the Census Bureau recognized only that part of the census tract within the city as the CBD (or part of the CBD). See also major retail center.

Central city The largest city of an MA or, from the 1950 through 1980 censuses, an urbanized area (UA). (Also included as central cities are the CDP of Honolulu in Hawaii, highly urban MCDs in Massachusetts and New Jersey, and several zonas urbanas in Puerto Rico.) Central cities are a basis for establishment of an MA, and prior to the 1990 census, a UA. Additional cities that meet specific criteria also are identified as central city(ies). In a number of instances, only part of a city qualifies as central, because another part of the city extends beyond the MA boundary. See also central place.

Central place The core incorporated place(s) or CDP(s) of a UA, usually consisting of the most populous place(s) in the UA. If a central place also is defined as an extended city, only the portion of the central place contained within the UA is recognized as the central place. The term was first used for the 1990 census to recognize a CDP as the most populous place in a UA. See also central city, extended city.

Centroid The central location within a specified geographic area. A centroid may fall outside its geographic area, or may be adjusted so that it is located within its geographic area. See also internal point.

Chapter (American Indian) See American Indian subreservation area.

City A type of incorporated place in 49 States and the District of Columbia. In 20 States, some or all cities are not part of any MCD, and the Census Bureau also treats these as county subdivisions, statistically equivalent to MCDs. See also county subdivision, dependent place, incorporated place, independent place.

City Reference File A file from the Economic and Agriculture Census that links the ZIP Codes and post office name information to the geographic entities and their associated codes used in that census (MAs, counties, and places, including incorporated places with more than 2,500 people, and selected MCDs referred to as special economic urban areas, or SEUAs).

City-style address An address consisting of a structure number and street name; for example, 201 Main St. See also address, general delivery address, post office box address, rural address.

Ciudad A term used by the government of Puerto Rico before the 1990 census to refer to a group of barrios (if they contained at least 50,000 people) that identified the municipio's center of government. See also barrio.

Civil township A type of MCD with a functioning government. See also county subdivision, functioning government, minor civil division.

CMSA See consolidated metropolitan statistical area.

Code The alphanumeric characters assigned to identify a geographic entity (geocode) or a class of population, industries, and occupations, for ease in computer processing, such as a county code, an industry code, an occupational code, a place size code, or an income level; to assign data on a questionnaire to one or more classes of some sort, the entities of which are identified through the use of codes. See also Federal Information Processing Standards, geocode, geographic code, geographic hierarchy, Geographic Identification Code Scheme.

Coextensive Descriptive of two or more geographic entities that cover the same area, with their boundaries coincident.

Coextensive place A place that covers exactly the same area and has the same boundaries as its county subdivision or county.

Coincident Descriptive of two or more features or boundaries that are physically in the same location; for example, a census tract boundary that also serves as a CCD boundary. Also, the common boundary of adjacent entities. See also adjacent, conjoint, contiguous.

Collection block For the 1990 census, a physical block, identified by a unique three-digit number, that was enumerated as a single geographic area regardless of any legal or statistical boundaries that passed through it. See also census block, collection geography, tabulation block, tabulation geography.

Collection geography The geographic entities used by the Census Bureau to take a census. In the 1980 census, this was district office/enumeration district/block; for 1990, district office/address register area/collection block.

Colony (American Indian) A type of American Indian reservation.

Commonwealth The legal designation for four States (Kentucky, Massachusetts, Pennsylvania, and Virginia) and two of the Outlying Areas (Puerto Rico and the Northern Mariana Islands). The Census Bureau does not use this term in presenting census data.

Community (American Indian) A type of American Indian reservation. See also American Indian subreservation area.

Compact disc read-only memory (CD-ROM) A type of high-density optical or laser disc for use on small computers. One 4 3/4 -inch CD-ROM can hold the contents of approximately 500 printed reports, 1,600 flexible diskettes, or 3 or 4 high-density computer tapes.

Comunidad A CDP in Puerto Rico for the 1990 census; formerly called an aldea. See also aldea, census designated place.

Congressional district (CD) An area established by State officials or the courts for the purpose of electing a person to the U.S. House of Representatives. Within each State, these areas must contain, as nearly as possible, an equal number of inhabitants. The number of CDs in each State may change after each decennial census, and the boundaries may be changed more than once during a decade. See also reapportionment, redistricting.

Congressional township See public land survey system, township (congressional or survey), township and range system.

Conjoint Descriptive of the boundaries for two or more geographic entities or governmental units for which governmental and administrative functions are carried out jointly; descriptive of a boundary shared by two adjacent geographic areas. See also adjacent, consolidated city, consolidated government, consolidation, contiguous, merger.

Consolidated city An incorporated place that has combined its governmental functions with a county or subcounty entity but contains one or more other incorporated places that continue to function as local governments within the consolidated government. See also consolidated government, consolidation, merger.

Consolidated government A governmental unit that comprises two or more legal entities that have joined together to form a common government; for example, a consolidated city-county government. The combined governmental units may or may not occupy the same territory. See also consolidated city, consolidation, merger.

Consolidated metropolitan statistical area (CMSA) A geographic entity defined by the Federal Office of Management and Budget (OMB) for use by Federal statistical agencies. An area becomes a CMSA if it meets the requirements to qualify as a metropolitan statistical area (MSA), has a population of 1,000,000 or more, if component parts are recognized as primary metropolitan statistical areas (PMSAs), and local opinion favors the designation. Whole counties are components of CMSAs outside of New England, where they are composed of cities and towns instead. See also metropolitan area, metropolitan statistical area, primary metropolitan statistical area, standard consolidated area, standard consolidated statistical area, standard metropolitan area, standard metropolitan statistical area.

Consolidation A combination of two or more governmental units. The units may be at the same or different levels of government. See also consolidated city, consolidated government, merger.

Construction (census) See economic census.

Coterminous States The coterminous 48 States and the District of Columbia; that is, the United States excluding Alaska and Hawaii.

Contiguous Descriptive of geographic areas that are adjacent to one another, sharing either a common boundary or point. See also adjacent, conjoint.

Contract block area An area for which a local government paid the Census Bureau to collect and publish decennial census data at the block level because the area was not included automatically in the block-numbering program for a decennial census. This kind of area did not exist for the 1990 census, because the Census Bureau automatically collected and published census block-level data nationwide. See also census block, free block area.

Corporate corridor A narrow strip of land, generally consisting of all or part of the right-of-way of a road, proposed road, power line, or similar feature, that is part of an incorporated place; a corridor also may exist without relation to any accompanying visible feature.

Coterminous A term descriptive of geographic entities that are contiguous with one another and are contained within the same boundaries; for example, the coterminous 48 States and the District of Columbia. See also conterminous States.

County A type of governmental unit that is the primary legal subdivision of every State except Alaska and Louisiana; also, a type of functioning MCD found in American Samoa. See also borough, county equivalent, parish.

County Block Map A set of large-scale maps for each county or equivalent entity, displaying boundaries and names/numbers of census blocks, decennial census tabulation entities, and ground features such as roads and streams. These maps are the most detailed and complete set of cartographic information that the Census Bureau provides.

County code A three-digit code assigned by the National Institute of Standards and Technology (NIST) to identify each county and statistically equivalent entity within a State. The NIST assigns the codes based on the alphabetic sequence of county names; it documents these codes in a FIPS publication (FIPS PUB 6). The Census Bureau also documents these codes in its Geographic Identification Code Scheme. The

NIST leaves gaps in the numbering system to accommodate new counties or statistically equivalent entities. See also Federal Information Processing Standards, Geographic Identification Code Scheme.

County equivalent A geographic entity that is not legally referred to as a county, but is recognized by the Census Bureau as equivalent to a county for purposes of data presentation. See also borough, census area, district, independent city, island, municipality, municipio, parish, State.

County group An area with a population of 100,000 or more, generally comprising a group of contiguous counties, identified on one of the 1980 or 1990 census public-use microdata samples (PUMS). The term is applied loosely, since some of the areas included are single counties, single cities, groups of places, or groups of towns or townships in New England and a few other States, all of which meet the 100,000 minimum population criterion. See also public-use microdata area, public-use microdata sample.

County subdivision A legal or statistical division of a county recognized by the Census Bureau for data presentation. See also barrio, barrio-pueblo, census county division, census subarea, census subdistrict, city, gore, grant, island, location, minor civil division, municipality, plantation, purchase, town, township, unorganized territory, village.

County Subdivision Outline Map A State-based map depicting the boundaries and names of the counties and equivalent entities, county subdivisions, AIANAs, and places for which the Census Bureau tabulated 1990 census data. These maps are issued as electrostatic plots consisting of only one or a few map sheets for each State; they also are available in smaller scale, sectionalized form in census publications.

Crews of vessels The shipboard populations of U.S. Navy, U.S. Coast Guard, and merchant marine vessels. For a decennial census, they are assigned to the offshore area adjacent to the land area that contains the facility, pier, or dock associated with the ship; this location is assigned a unique census tract or BNA number, with a suffix of .99, and a unique block number of either 199 (for a military vessel) or 299 (for a civilian vessel). This area is more conceptual than geographic, and has no area measurement assigned to it.

CRF See City Reference File.

CSA See census subarea.

CSAC See census statistical areas committee.

CSAKP See census statistical areas key person.

CTKP See census tract key person.

Cultural feature Any type of artificial feature, such as a street, power line, or fence. See also feature, natural feature, visible feature.

Data base (census geographic) See TIGER data base.

Decennial census The census of population and housing, taken by the Census Bureau in years ending in 0 (zero). Article I of the Constitution requires that a census be taken every ten years for the purpose of reapportioning the U.S. House of Representatives. The first census of population occurred in 1790; the census of housing has been conducted since 1940. See also reapportionment, redistricting.

Delineate To draw or identify on a map the specific location of a boundary.

Dependent place An incorporated place or CDP that is legally or statistically part of the county(ies) and/or county subdivision(s) within which it is located; the statistical data for the place also are tabulated as part of the total for the county(ies) and/or county subdivision(s) that these data are part of. There are three types of dependent places: (1) an incorporated place that is legally part of the county(ies) and/or MCD(s) within which it is located, (2) an incorporated place that is legally part of the county(ies) and statistically part of the county subdivision(s) within which it is located, and (3) a CDP that always is statistically part of the county(ies) and county subdivision(s) within which it is located. See also incorporated place, independent place.

Detach To legally remove an area from a governmental unit, usually an incorporated place, by an ordinance, a court order, or other legal action. Also refers to the act or process of being separated from a governmental unit. See also annex.

Disincorporate To end the legal existence of an incorporated place as an active or inactive governmental unit through legal action by the incorporated place, or a county/State. See also active governmental unit, disorganize, functional status (governmental), functioning governmental unit, inactive governmental unit.

Disorganize To end the legal existence of an MCD as a governmental unit through legal action taken by a county/State. See also disincorporate, functional status (governmental), functioning governmental unit, nonfunctioning governmental unit.

District A type of nonfunctioning county equivalent found in American Samoa; any of several types of geographic areas recognized by the Census Bureau. See also American Indian subreservation area, assessment district, election district, magisterial district, municipal district, Outlying Area, parish governing authority district, road district, voting district.

Division (census geographic) A grouping of States within a census geographic region, established by the Census Bureau for the presentation of census data. The current nine divisions (East North Central, East South Central, Middle Atlantic, Mountain, New England, Pacific, South Atlantic, West North Central, and West South Central) are intended to represent relatively homogeneous areas that are subdivisions of the four census geographic regions. See also region (census geographic).

EC See economic census.

Economic census (EC) Collective name for the censuses of construction, manufactures, minerals, minority- and women-owned businesses, retail trade, service industries, transportation, and wholesale trade, conducted by the Census Bureau every five years, in years ending in 2 and 7. See also census of agriculture, census of governments.

Economic Geographic Information Reference Tape (EGIRT) Before 1992, the control file for geographic codes related to all economic censuses, used for editing the Address Reference File (ARF) and the City Reference File (CRF). The EGIRT contained names and codes for all geographic entities that the Census Bureau recognized in the EC data tabulations.

Economic Geographic Reference File (EGRF) The reference file of geographic entities for the 1992 economic census; replaces the EGIRT used in earlier economic censuses. See also Economic Geographic Information Reference Tape.

Economic subregion (ESR) A combination of two or more State economic areas into a larger, relatively homogeneous geographic unit. The subregions may cross State lines, but are intended to preserve the similar characteristics of the state economic areas used by the Census Bureau to report decennial census data from the 1950 through the 1980 censuses. See also State economic area.

ED See enumeration district.

ED number A one- to four-digit number, in some instances including an alphabetic suffix, that uniquely identified each enumeration district within a district office and county for the 1980 and earlier decennial and special censuses. See also enumeration district.

EGIRT See Economic Geographic Information Reference Tape.

EGRF See Economic Geographic Reference File.

Election district A nonfunctioning class of MCDs in Guam and Maryland.

Election precinct (EP) A nonfunctioning class of MCDs in Illinois and Nebraska that represent a voting area. In the 1980 census, the term used by the Census Bureau for a voting district. See also precinct, voting district.

Elementary school district A school district inclusive of kindergarten through either the eighth or ninth grade or the first through either the eighth or the ninth grade. For the data tabulations from the 1980 and 1990 decennial censuses, this term includes both elementary and intermediate/middle districts. See also independent district, intermediate/middle district, school district, secondary district.

Enclave An island of area with one set of geographic codes within and completely surrounded by an area with a different set of geographic codes; usually refers to unincorporated area that is completely surrounded by an incorporated place.

Enumeration district (ED) A small geographic entity established by the Census Bureau as a basic unit for data collection and tabulation in a decennial or special census before 1990. (For the 1970 and 1980 censuses it was superseded by the BG as the lowest level for which the Census Bureau tabulated sample data in those areas that had block numbers assigned.) An ED usually consisted of the area to be assigned to an individual enumerator for canvassing. All area included in a single ED was in the same governmental unit(s) or statistical area(s). The ED was replaced by the address register area (ARA) for data collection purposes in the 1990 census; it also was totally replaced by the BG as the lowest level of geography for which the Census Bureau tabulated sample data. See also address register area, block group, ED number, sample data.

EP See election precinct.

ESR See economic subregion.

Exclave A discontinuous part of a geographic entity; also referred to as an outlier. Usually refers to a small portion of an incorporated place that is completely separate from the remainder of the place.

Extended city An incorporated place that contains large, sparsely settled area(s) within its legally defined boundaries; that is, one or more areas with a population density of less than 100 persons per square mile, each of which is at least 5 square miles in extent, which together constitute at least 25 percent of the place's total land area or at least 25 square miles. These low-density areas are classified as rural; the remainder of the extended city is classified as urban. Before the 1990 census, the Census Bureau identified extended cities only within urbanized areas.

Feature Any part of the landscape, whether natural (such as a stream or ridge) or artificial (such as a road or power line). In a geographic context, features are any part of the landscape portrayed on a map, including legal entity boundaries such as city limits or county lines. See also cultural feature, nonvisible feature, visible feature.

Feature extension The imaginary straight-line extension from the end of a map feature, usually a street or road, to another feature; for example, from the end of a dead-end street to a nearby river.

Federal Information Processing Standards (FIPS) Any of the standardized systems of numeric and/or alphabetic coding issued by the National Institute of Standards and Technology (NIST), an agency in the U. S. Department of Commerce, for use by the Federal Government and others. Several series of FIPS identify standard geographic codes for States, counties, metropolitan areas, congressional districts, foreign geographic entities, and named populated and related locational entities. Geographic elements to be assigned codes are first alphabetized and then assigned codes serially, generally with systematic gaps that permit additions to the list. The basic geographic code formats published in FIPS publications (FIPS PUBs) are (1) States two digits, (2) counties and county equivalents three digits, (3) metropolitan areas four digits; CMSAs and the former SCSAs also have two-digit codes, (4) congressional districts two digits, (5) foreign geographic entities two or three digits, (6) named populated places, primary county divisions, and other locational entities used to assign codes to places, county subdivisions, and AIANAs five digits. See also FIPS code.

FIPS See Federal Information Processing Standards.

FIPS code One of a series of codes, issued by the NIST, assigned for the purpose of ensuring uniform identification during computer processes involving geographic entities throughout all Federal Government programs and agencies. See also Federal Information Processing Standards.

FIPS PUB See FIPS publication.

FIPS publication (FIPS PUB) One in a series of U.S. Government publications containing a standard set of geocodes for different types of geographic entities. See also Federal Information Processing Standards, FIPS code.

Free block area An area for which the Census Bureau provided block-level data without charge in the 1980 and earlier decennial censuses. See also census block, contract block area.

Functional status (governmental) The administrative or legal activities associated with performing the legally prescribed functions of a governmental unit; that is, the administrative or legal entity is functioning or nonfunctioning, and if functioning, is either active or inactive. See also active governmental unit, functioning governmental unit, governmental unit, inactive governmental unit, nonfunctioning governmental unit.

Functioning governmental unit A general-purpose government that has the legal capacity to elect or appoint officials, raise revenues, provide services, and enter into contracts. See also active governmental unit, functional status (governmental), general-purpose government, governmental unit, inactive governmental unit, nonfunctioning governmental unit.

GARM See Geographic Areas Reference Manual.

GBF See Geographic Base File.

GBF/DIME-File (Geographic Base File/Dual Independent Map Encoding File) A geographic base file created by the Census Bureau, usually in cooperation with local officials, representing the line segments and related geographic attributes that comprised all or part of the urban cores of all metropolitan areas. Created for the 80 smaller urban cores to supplement the ACG coverage for the 1970 census and support the place of work coding operation, this format was expanded to include all urban cores for the 1980 census by converting the ACGs in a program called the ACG Improvement Program. Each file

contained the name of each segment of a mapped feature, its associated address range and ZIP Code if applicable, 1980 census geographic area information for both sides of each segment, node numbers that identified feature intersections and selected points of a curved line, and x,y coordinate information for each node in the file. The file contained information describing the street network in the major urban centers, and was used to build the TIGER data base. See also Address Coding Guide, geographic base file, TIGER data base, TIGER System.

General delivery address A type of postal delivery service offered at post offices without carrier delivery service for customers who do not want a post office box, and at any post office to serve transients and customers who are not permanently located. See also address, city-style address, post office box address, rural address.

General-purpose government A functioning governmental unit that, through appointed or elected officials, performs many tasks and provides a wide range of services. See also governmental unit.

Geocode A code assigned to identify a geographic entity; to assign an address (such as housing unit, business, industry, farm) to the full set of geographic code(s) applicable to the location of that address on the surface of the Earth. See also Address Coding Guide, GBF/DIME-File, geographic base file, geographic code, TIGER data base, TIGER System.

Geographic Areas Reference Manual (GARM) A geographic reference source developed by the Census Bureau as a guide for local CSACs and other agencies and groups working with the Census Bureau to maintain and improve the geographic areas, concepts, and methods used for the presentation of decennial and economic census data. See also census statistical areas committees, census tract manual.

Geographic base file (GBF) A generic term for a computer file of geographic attributes of an area (such as street names, address ranges, geographic codes, hydrography, railroads). See also Address Coding Guide, GBF/DIME-File, TIGER data base, TIGER System.

Geographic code One or more alphanumeric symbols used to identify a legal, administrative, or statistical entity. See also Address Coding Guide, Federal Information Processing Standards, GBF/DIME-File, geocode, geographic base file, geographic data base, TIGER data base, TIGER System.

Geographic data base A computer-readable data base, the primary structure of which includes geographic codes and/or coordinates. The GBF/DIME-File and TIGER data base are geographic data bases used by the Census Bureau to conduct the 1980 and 1990 censuses, respectively. See also Address Coding Guide, GBF/DIME-File, TIGER data base, TIGER System.

Geographic entity A geographic unit of any type legal, administrative, or statistical. See also geographic code, geographic data base, geographic hierarchy.

Geographic hierarchy A system of relationships among geographic entities in which each geographic entity (except the smallest one) is subdivided into lower-order units that in turn may be subdivided further. For example, States are subdivided into counties, which are subdivided into county subdivisions. Most 1990 census reports and STFs present data in all or part of the hierarchical sequence: United States, region, division, State, county, county subdivision, place (incorporated/census designated), place part or remainder of county subdivision, census tract/block numbering area (or part), block group (or part), and block. See also geographic code, geographic data base, part.

Geographic Identification Code Scheme (GICS) A detailed listing of the geographic codes, associated names, and attributes that the Census Bureau used to identify the various legal, administrative, and statistical geographic entities of the United States in a specific census. See also administrative entity, legal entity, statistical entity.

Geographic reference file (GRF) A generic term for a file that contains geographic information such as area names, geographic codes, and selected x,y coordinate values (entity centroid or internal point). Geographic reference files may be used for determining the name of a particular geographic entity when only its code is known (or vice versa), and for control of geographic operations, computer mapping, and entity name placement, depending on the information contained in the specific file. See also Economic Geographic Information Reference Tape, Economic Geographic Reference File, Geographic Identification Code Scheme, Geographic Reference File (Codes), Geographic Reference File (Names).

Geographic Reference File (Codes) (GRF-C) A Census Bureau computerfile listing all geographic codes associated with a census block record.

Geographic Reference File (Names) (GRF-N) A Census Bureau computer file listing the names of each geographic entity and their associated attributes.

Geographic Support System (GSS) The TIGER System, plus all other activities undertaken by the Geography division to support the census and survey activities of the Census Bureau. This includes all decennial census geographic products maps, TIGER/Line filesTM, other TIGER extract products, and related computer systems; all economic and agriculture censuses geographic products the Address Reference File (ARF), City Reference File (CRF), Economic Geographic Reference File (EGRF), and related computer systems. Also includes geographic activities related to the Master Address File (MAF), the special census program, the current sample survey program, all future census research and development activities, the operations that use the boundary change information collected in the BAS, the U.S. Geological Survey (USGS) quadrangles and other reference/map source files, and the congressional district referral service. See also TIGER data base, TIGER System.

GICS See Geographic Identification Code Scheme.

Gore A type of nonfunctioning MCD found in Maine and Vermont.

Governmental unit A geographic entity established by legal action, and for the purpose of implementing administrative or governmental functions. Most governmental units have officially recognized boundaries. All area and population of the United States are part of one or more legal units, such as American Indian reservations, States, counties, county subdivisions, and incorporated places. See also active governmental unit, administrative entity, functioning governmental unit, general-purpose government, inactive governmental unit, legal entity, nonfunctioning governmental unit.

Governments, (census) See census of governments.

Grant A type of nonfunctioning MCD in New Hampshire and Vermont.

GRF See Geographic Reference File.

GRF-C See Geographic Reference File (Codes).

GRF-N See Geographic Reference File (Names).

Group quarters A place where unrelated people live, such as a barracks, a boarding house, a dormitory, a hospital, or a prison. Group quarters are not typical housing units such as apartments, townhouses, and single family homes.

GSS See Geographic Support System.

Hierarchy (census geographic) See geographic hierarchy.

Historic Areas of Oklahoma The area of the former American Indian reservations that had legally established boundaries during the period 1900 through 1907 but were dissolved during the two- to three-year period preceding the establishment of Oklahoma as a State in 1907. The Historic Areas boundaries were delineated for the Census Bureau by the BIA and excluded all territory in urbanized areas. They were used for tabulating data from the 1980 census. The Census Bureau did not retain the Historic Areas for the 1990 census. See also tribal jurisdiction statistical area.

Inactive governmental unit A governmental unit that is not exercising its legal capacity to have elected or appointed officials; thus, it neither raises revenue nor provides services. An inactive governmental unit is not classified as a government by the Census Bureau. See also active governmental unit, functional status (governmental), functioning governmental unit, governmental unit, nonfunctioning governmental unit.

Incorporated place A type of governmental unit, incorporated under State law as a city, town (except in New England, New York, and Wisconsin), borough (except in Alaska and New York), or village, having legally prescribed limits, powers, and functions. See also dependent place, governmental unit, independent place.

Independent city An incorporated city that is a primary division of a State and legally not part of any county. The Census Bureau treats an independent city as both a county equivalent and MCD equivalent for data tabulation purposes. See also incorporated place.

Independent place An incorporated place that legally is not part of any MCD. The Census Bureau treats independent places as a primary division of a county and an MCD equivalent for data tabulation purposes. See also dependent place, incorporated place.

Independent school district A type of public school system that is administratively and fiscally independent of any other governmental unit. (By contrast, a dependent public school system is an agency of some other government State, county, municipal, or township.) The census of governments collects and tabulates data for both kinds of school districts.

Indian reservation See American Indian reservation.

Individual trust lands See American Indian trust land.

Intermediate/middle school district A school district inclusive of the fifth through eighth grade, the sixth through the ninth grade, the seventh and eighth grades, or the seventh through ninth grade. The Census Bureau did not provide a separate identification of intermediate/middle school districts in its 1990 census tabulations. See also elementary district, independent district, school district, secondary district.

Internal point A coordinate value for a point that lies within its geographic area; where possible, the internal point also is a centroid. See also centroid.

Island An area of land totally surrounded by water; a type of nonfunctioning county equivalent in American Samoa and the Virgin Islands of the United States; a type of nonfunctioning MCD equivalent in American Samoa.

Joint use area (American Indian) Territory that is administered jointly and/or claimed by two or more American Indian tribes.

Jump The process by which the Census Bureau includes qualifying territory (that is, territory with a population density of at least 1,000 people per square mile) in an urbanized area (UA) when that territory is not adjacent to the main body of the UA. The non-adjacent qualifying territory must be connected to the main body of the UA either by roads or other transportation arteries; these arteries may be no more than 1.5 miles in combined length over developable land, or no more than 5 miles in combined length over water or undevelopable territory. See also adjacent, jump corridor, population density, undevelopable land, urbanized area.

Jump corridor Territory forming a corridor along the transportation artery(ies) connecting non-adjacent qualifying territory to the main body of an urbanized area (UA). For the 1990 census, the jump corridor, together with the qualifying territory that was not adjacent to the main body of the UA, had to have a population density of at least 500 people per square mile. See also adjacent, jump, population density, urbanized area.

Legal entity A geographic entity whose boundaries, name, origin, and political/statistical area description result from charters, laws, treaties, or other administrative or governmental action. In earlier censuses, often referred to as a political area or entity. Legal entities include States, counties, minor civil divisions, American Indian reservations, and Alaska Native Regional Corporations. See also administrative entity, governmental unit, political/statistical area description, statistical entity.

Legislative district An area from which a person is elected to serve in a State legislative body. See also voting district.

Linear feature A feature, such as a railroad, road, street, stream, pipeline, or boundary that can be represented by a line in a geographic data base. See also TIGER data base, visible feature.

Location A type of nonfunctioning MCD found in New Hampshire.

Long form The decennial census questionnaire, sent to approximately one in six households for the 1980 and 1990 censuses, that contains, in addition to all questions on the short form, detailed questions relating to the social, economic, and housing characteristics of each individual and household. Information derived from the long form is referred to as sample data, and is tabulated for geographic entities as small as the block group level in 1980 and 1990 census data products. See also block group, 100-percent data, sample data, short form.

MA See metropolitan area.

MA code The NIST issues numeric FIPS codes for MAs. FIPS codes for MSAs and PMSAs (and NECMAs) are four-digit codes; CMSAs are assigned two-digit FIPS codes. NIST also has made available an alternative set of four-digit codes for CMSAs. See also Federal Information Processing Standards, Geographic Identification Code Scheme.

MAF See Master Address File. **Magisterial district** A type of nonfunctioning MCD found in Virginia and West Virginia.

Major retail center (MRC) A cluster of retail stores outside the CBD containing at least one general merchandise store, with a specified minimum dollar amount in annual sales or a specified minimum amount of floor space. Defined and used by the Census Bureau for the Censuses of Retail Trade from 1954 through 1982. See also central business district.

Manufactures (census) See economic census.

Master Address File (MAF) The Census Bureau's permanent list of addresses for individual living quarters that is linked to the TIGER data base and will be continuously maintained through partnerships with the USPS, with Federal, State, regional, and local agencies, and with the private sector. (The MAF will eventually include addresses for business establishments.)

MCD See minor civil division.

Merger The joining of two or more geographic entities, generally governmental units, but also MAs or UAs, into a single geographic entity. See also annexation, conjoint, consolidated city, consolidated government, consolidation.

Metropolitan area (MA) A collective term, established by the Federal OMB and used for the first time in 1990, to refer to metropolitan statistical areas (MSAs), consolidated metropolitan statistical areas (CMSAs), and primary metropolitan statistical areas (PMSAs). In addition, there is an alternative set of areas termed NECMAs. See also metropolitan districts.

Metropolitan Areas Map A large-scale color map showing the boundaries and names of all MSAs, CMSAs, and PMSAs in the United States and Puerto Rico as of June 30, 1993. The MAs are displayed in four different population size categories; also shown are the extent of UAs and the location of State and county boundaries. Formatted in wall size (46 inches by 30 inches), this map is Number 4 in the Census Bureau's GE-90 Map Series.

Metropolitan district A statistical area comprising a central city and adjacent incorporated places, densely settled MCDs, and, in some cases, EDs. It was used in the 1910, 1920, 1930, and 1940 decennial censuses, and was the forerunner of the MA and the UA.

Metropolitan planning organization (MPO) A local governmental unit that has legal jurisdiction over a geographic area for government service planning such as transportation and land-use planning.

Metropolitan statistical area (MSA) A geographic entity, defined by the Federal OMB for use by Federal statistical agencies, based on the concept of a core area with a large population nucleus, plus adjacent communities having a high degree of economic and social integration with that core. Qualification of an MSA requires the presence of a city with 50,000 or more inhabitants, or the presence of a UA and a total population of at least 100,000 (75,000 in New England). The county or counties containing the largest city and surrounding densely settled territory are central counties of the MSA. Additional outlying counties qualify to be included in the MSA by meeting certain other criteria of metropolitan character, such as a specified minimum population density or percentage of the population that is urban. MSAs in New England are defined in terms of cities and towns, following rules concerning commuting and population density. MSAs were first defined and effective June 30, 1983. See also consolidated metropolitan statistical area, metropolitan area, metropolitan statistical area, primary metropolitan statistical area, standard consolidated area, standard consolidated statistical area, standard metropolitan area, standard metropolitan statistical area.

Microdata See public-use microdata sample.

Minerals (census) See economic census.

Minor civil division (MCD) A type of governmental unit that is the primary legal subdivision of a county in 28 States, created to govern or administer an area rather than a specific population. The several types of MCDs are identified by a variety of terms, such as town, township, and district, and include both functioning and nonfunctioning governmental units. Many MCDs represent local, general-purpose governmental units, which makes them required areas for presentation of decennial census data. See also

census county division, census subarea, county subdivision, incorporated place, independent place, unorganized territory.

Minor civil division (MCD) code A three-digit numeric code assigned by the Census Bureau to identify each MCD within a county (the Census Bureau assigns the codes based on the alphabetical sequence of the MCD names); also, a five-digit numeric code assigned by the NIST to identify populated places, primary county divisions, and other locational entities within a State. The NIST assigns the codes based on the alphabetic sequence of the entity names; it documents these codes in FIPS 55. See also Geographic Identification Coding Scheme, Federal Information Processing Standards.

Minority- and women-owned businesses, (census of) See economic census.

MPO See metropolitan planning organization.

MRC See major retail center.

MSA See metropolitan statistical area.

Municipal district A type of nonfunctioning MCD found in Guam.

Municipality A type of functioning county equivalent found in the Northern Mariana Islands for the 1990 census; a functioning MCD found in the Northern Mariana Islands for the 1980 census and in Palau for the 1990 census; the generic term used for a general-purpose local government, such as an incorporated place or MCD.

Municipio A type of governmental unit that is the primary legal subdivision of Puerto Rico; the Census Bureau treats the municipio as the statistical equivalent of a county.

National Institute of Standards and Technology (NIST) An agency of the U.S. Department of Commerce, the NIST (formerly the National Bureau of Standards) serves as the Nation's science and engineering laboratory for measurement technology and standards research.

Natural feature Any part of the landscape resulting from natural processes (such as a stream or ridge), in contrast to the activity of man. See also cultural feature, feature, visible feature.

NECMA See New England County Metropolitan Area.

Neighborhood A special-purpose entity delineated for the Census Bureau's 1980 Neighborhood Statistics Program. Neighborhoods have locally defined boundaries, and the Census Bureau treated them as subareas within a legally defined governmental unit, usually an incorporated place or county.

New England County Metropolitan Area (NECMA) County-based areas defined by the Federal OMB to provide an alternative to the city- and town-based MSAs and CMSAs in New England. A NECMA includes the county containing the first-named place in an MSA/CMSA title (this county may include the first-named places of other MSAs or CMSAs), and each additional county having at least half its population in the MSA(s)/CMSA(s) whose first-named place is in the county identified in the previous step. NECMAs were first defined in 1975. See also consolidated metropolitan statistical area, metropolitan area, metropolitan statistical area.

NIST See National Institute of Standards and Technology.

Nonfunctioning governmental unit A legally defined governmental unit that does not have appointed or elected officials, raise revenues, or perform general purpose governmental activities such as enacting laws,

entering into contracts, or providing services. The term usually refers to an entity established to administer a task assigned to another governmental unit. A nonfunctioning governmental unit is not classified as a government by the Census Bureau. See also active governmental unit, administrative entity, functioning governmental unit, functional status (governmental), governmental unit, inactive governmental unit.

Nonmetropolitan The area and population not located in any MA.

Nonphysical feature See nonvisible feature.

Nonresidential urban land use Any type of cultural land use, such as parks, transportation facilities (airports and railyards), factories, and office and industrial parks, that generally are not populated, but are considered to be integral parts of the urban landscape. When calculating the population density of a census block or AU to define a UA or extended city, the Census Bureau disregards the land area occupied by such land uses; the resultant population density figure more accurately reflects the residential density of the census block or AU. See also population density.

Nonstreet feature A map feature that is not a street, but for which records exist on a map or in a geographic base file. Nonstreet features include pipelines, governmental unit boundaries, power lines, railroads, and water features. See also nonvisible feature, visible feature.

Nonvisible feature A map feature that is not visible, such as a city or county boundary, a property line, a short imaginary extension of a street or road, or a point-to-point line. See also visible feature.

OA See Outlying Area.

Off-reservation A subreservation entity, or tribal or individual trust land, that is located entirely outside the boundaries of an American Indian reservation. See also American Indian subreservation area, American Indian trust land.

Office of Management and Budget (OMB) The OMB (formerly the Bureau of the Budget) is that part of the Executive Branch responsible for evaluating, formulating, and coordinating management procedures and program objectives within and among Federal departments and agencies. It also controls the administration of the Federal budget, while routinely providing the President with recommendations regarding budget proposals and relevant legislative enactments.

OMB See Office of Management and Budget.

100-percent data Population and housing information collected from both the long form and the short form for every inhabitant and household in the United States, and tabulated for all geographic levels down to the census block. See also geographic hierarchy, long form, sample data, short form.

Organized territory Any area that lies within an established legal entity, such as a State, county, MCD, or incorporated place. See also unorganized territory.

Outlier See exclave.

Outlying Area An entity, other than a State or the District of Columbia, under the jurisdiction of the United States; for the 1990 census, this included American Samoa, Guam, the Northern Mariana Islands, Palau, Puerto Rico, the Virgin Islands of the United States, and several small islands in the Caribbean Sea and the Pacific Ocean. The Census Bureau treated other entities as outlying areas in earlier censuses. The Census Bureau uses Puerto Rico and the Outlying Areas to refer to these areas as a group.

Parish A type of governmental unit that is the primary legal subdivision of Louisiana, similar to a county in other States.

Parish governing authority district (PGAD) A type of nonfunctioning MCD found in Louisiana used for reporting decennial census data.

Part That portion of a geographic entity contained within some higherlevel geographic entity, the boundary of which transects the first entity. See also administrative entity, geographic entity, geographic hierarchy, legal entity, statistical entity.

PGAD See parish governing authority district.

Physical feature See visible feature.

Place A concentration of population either legally bounded as an incorporated place, or identified by the Census Bureau as a CDP. Incorporated places have political/statistical descriptions of borough (except in Alaska and New York), city, town (except in New England, New York, and Wisconsin), or village. See also census designated place, incorporated place, political/statistical area description.

Place code A four-digit code assigned by the Census Bureau to identify each incorporated or census designated place within a State (the Census Bureau assigns the codes based on the alphabetic sequence of the place names). Also, the five-digit numeric code assigned by the NIST to identify populated places, primary county divisions, and other locational entities within a State. The NIST assigns the codes based on the alphabetic sequence of the entity names; it documents the codes in FIPS PUB 55. See also Geographic Identification Code Scheme, Federal Information Processing Standards.

Plantation A type of functioning MCD found in Maine.

PLSS See public land survey system.

PMSA See primary metropolitan statistical area.

Police jury ward A type of nonfunctioning MCD found in Louisiana and used to tabulate data in the 1980 and several earlier decennial censuses; replaced by the parish governing authority district for the 1990 census.

Political entity See administrative entity, governmental unit, legal entity, statistical entity.

Political/statistical area description (PSAD) A two-digit numeric code identifying each type of geographic entity in terms of its legal status or status as a statistical entity. (The Census Bureau established 98 PSADs for use in the 1990 census.) The Census Bureau uses PSADs to tabulate data for geographic entities by type, and, where necessary, to append the type to the entity name in the census data presentations.

Population density A numerical method of expressing the extent to which people are clustered within a specific geographic area, usually in terms of people per square mile or per square kilometer. The population density of an area is derived by dividing the total population of the entity by the total land area of the entity. See also jump, nonresidential urban land use, urban fringe, urbanized area.

Post office box address An address that refers to a box number in a post office building, and not to the actual physical location of a housing unit or business establishment. See also address, city-style address, general delivery address, rural address.

Precinct A legal entity subdividing a county, established by counties or municipalities for administrative or electoral purposes and used by the Census Bureau as an MCD in Illinois and Nebraska; one of several types of small geographic entities created by State and local governments for the purpose of administering elections, and for which the Census Bureau tabulated data in 1980 and 1990 as prescribed by Public Law 94-171. See also administrative entity, election precinct, minor civil division, voting district.

Primary metropolitan statistical area (PMSA) A geographic entity defined by the Federal OMB for use by Federal statistical agencies. If an area meets the requirements to qualify as a metropolitan statistical area (MSA) and has a population of one million or more, two or more PMSAs may be defined within it if statistical criteria are met and local opinion is in favor. A PMSA consists of a large urbanized county, or a cluster of such counties (cities and towns in New England) that have substantial commuting interchange. When one or more PMSAs have been recognized, the balance of the original, larger area becomes an additional PMSA; the larger area of which they are components then is designated a consolidated metropolitan statistical area (CMSA). PMSAs were first defined and effective on June 30, 1983. See also consolidated metropolitan statistical area, metropolitan area, metropolitan statistical area, standard consolidated area, standard consolidated statistical area, standard metropolitan area, standard metropolitan statistical area.

PSAD See political/statistical area description.

Pseudo MCD Refers to the MCD recognized in, and comprising the area of, Arlington County, Virginia; St. Louis, Missouri; other independent cities; and independent places below the county level. Although these entities have no MCDs, it is inappropriate to classify them as unorganized territory. See also county subdivision, independent city, independent place.

Public land survey system (PLSS) The grid system by which units of land in the United States are described in relation to established north-south (township) and east-west (range) base lines. The resultant areas are referred to as congressional townships, survey townships, or townships, and generally are six-square-mile units. Townships, in turn, may be subdivided into one-square-mile units, called sections, which also may be subdivided further. Because of the spherical shape of the earth and irregularities in the original surveys, occasional corrections, which appear on maps as jogs or offsets, are introduced along specific township and range lines. See also minor civil division, survey township, township (civil or governmental), township (congressional or survey), township and range system.

Public-use microdata area (PUMA) An area that defines the extent of territory for which the Census Bureau tabulates PUMS data. See also public-use microdata samples.

Public-use microdata samples (PUMS) Computerized files consisting of the actual responses provided by individuals about themselves and their housing units rather than summary or tabulated statistics for geographic areas. To maintain confidentiality, the PUMS files contain no names, addresses, or other information that would permit identification of an individual person or housing unit. Users can manipulate these files to prepare tabulations of their own design. See also public-use microdata area.

Pueblo A type of American Indian reservation; before the 1990 census, the term used for the legal subdivision, or MCD equivalent, of a municipio (the county equivalent) in Puerto Rico. The term barrio-pueblo replaced pueblo for the 1990 census. See also barrio-pueblo.

PUMA See public-use microdata area.

PUMS See public-use microdata samples.

Purchase A type of nonfunctioning MCD found in New Hampshire.

Rancheria (American Indian) A type of American Indian reservation.

Range See public land survey system, township and range system.

Reapportionment The redistribution of seats in the U.S. House of Representatives among the several States on the basis of the most recent decennial census, as required under Article I of the Constitution. See also decennial census, redistricting.

Redistricting The delineation of representational district boundaries, based on the most recent decennial census, for the purpose of electing representatives to a State legislature, the U.S. House of Representatives, or a county or city council. See also decennial census, election district, election precinct, precinct, reapportionment, voting district.

Region (census geographic) Four groupings of States (Northeast, South, Midwest, and West) established by the Census Bureau in 1942 for the presentation of census data. Each region is subdivided into divisions. See also division (census geographic).

Reservation A type of functioning MCD equivalent found in Maine and New York, consisting of an American Indian reservation recognized by the Federal government or a State government; the reservation is independent of any other MCD. See also American Indian reservation.

Reserve (American Indian) A type of American Indian reservation.

Retail trade (census) See economic censuses.

Road district A type of functioning MCD found in Potter County, Pennsylvania, originally established to maintain roads, that has become a general-purpose government.

Rural The population and territory outside any UA and the urban part of any place with a decennial census population of 2,500 or more. See also extended city, place, urban, urban area, urban place, urbanized area.

Rural address An address consisting of a delivery route number and a box number, both assigned by the local post office for delivery of mail at a specific physical location. RR (rural route) is the most frequent route designation; also possible are HC (highway contract), RD (rural delivery), RFD (rural free delivery). See also address, city-style address, general delivery address, post office address.

Rural place Any incorporated place or CDP located outside a UA and having fewer than 2,500 residents in the most recent decennial census. See also census designated place, incorporated place, urban place.

SAC See Statistical Areas Committee.

Sample A statistical subset of the total population, used to estimate information about the population; to statistically select a subset of the total population, for the purpose of estimating information about that population. See also census, sample data, survey.

Sample data Detailed social, economic, and housing information collected on the decennial census long form from approximately one in six households nationwide. The Census Bureau tabulated sample data from the 1980 and 1990 decennial census to the block group level. See also decennial census, long form, 100-percent data, short form.

Sample survey The collection of information for a sample of people, housing units, and economic activities. See also census, sample.

SCA See standard consolidated area.

School attendance area A special-purpose geographic entity delineated by State, county, or local officials designating the school(s) that school-age children in that particular area must attend. The Census Bureau does not provide separate data for school attendance areas. See also elementary school district, independent district, intermediate/middle school district, school district, secondary school district, unified school district.

School district The territory administered by the elected or appointed authorities of a State, county, or other local governmental unit to provide educational services to a resident population. A school district typically includes several school buildings, teachers, and related staff. The Census Bureau provided data tabulations for school districts from the 1970, 1980, and 1990 censuses. See also elementary school district, independent district, intermediate/middle school district, secondary school district, unified school district.

SCSA See standard consolidated statistical area.

SEA See State Economic Area.

Secondary school district A school district inclusive of only high school (either the ninth through the twelfth grades or the tenth through the twelfth grades). See also elementary district, independent district, intermediate/middle district, school district, unified school district.

Segment A portion, or subset, of a larger unit, generally in reference to population groups. For the Census Bureau, there are three specific uses of the term: (1) a type of administrative subdivision found on an American Indian reservation; (2) a portion of a linear feature, generally occurring between the intersections with two other linear features, but also between two points used to define the shape of a feature; and (3) the part of a census block (or ED in earlier decennial censuses) used as the sampling unit for the Census Bureau's sample surveys in areas without city-style addresses geocoded to the census block level. See also American Indian subreservation area, GBF/DIME-File, linear feature, TIGER data base, TIGER System.

Serpentine numbering The method or pattern of assigning numbers on a map in a snake-like, winding manner, with the intent of having each number located next to the other in the sequence.

Service industries (census) See economic census.

Short form The decennial census questionnaire, sent to approximately five of six households for the 1980 and 1990 censuses, that contains population questions related to household relationship, sex, race, age, marital status, and Hispanic origin as well as housing questions about the number of units in each structure, the number of rooms per unit, tenure, and value. The questions contained on the short form also are asked, along with additional questions, on the long form. See also long form, 100-percent data, sample data.

SMA See standard metropolitan area.

Small-area data The Census Bureau uses this term to refer to census statistics tabulated at the census block, block group, and census tract/BNAs level. (Many people also would include in this category, data for places and MCDs having fewer than 5,000 inhabitants.)

SMSA See standard metropolitan statistical area.

Special economic urban area (SEUA) A minor civil division in the Northeastern States, Michigan, Minnesota, and Wisconsin treated by the Census Bureau as equivalent to a place for statistical purposes in the economic censuses.

Standard consolidated area (SCA) The SCA was a forerunner of the CMSA. Two SCAs (for the New York and Chicago areas) existed between 1959 and 1975. These SCAs were combinations of SMSAs, although the New York SCA also included two counties that were not within any SMSA. The SCA was replaced by the SCSA. See also consolidated metropolitan statistical area, metropolitan area, metropolitan statistical area, primary metropolitan statistical area, standard consolidated statistical area, standard metropolitan area, standard metropolitan statistical area.

Standard consolidated statistical area (SCSA) The SCSA was a forerunner of the CMSA. An SCSA was a combination of two or more SMSAs that had substantial commuting between them and where at least one of the SMSAs had a population of 1,000,000 or greater. SCSAs were first defined in 1975 and used until June 1983. See also consolidated metropolitan statistical area, metropolitan area, metropolitan statistical area, primary metropolitan statistical area, standard consolidated area, standard metropolitan area, standard metropolitan statistical area.

Standard metropolitan area (SMA) SMA was the first term used for official metropolitan areas as defined by the then Bureau of the Budget. SMAs were first defined in 1949 for the 1950 decennial census, and the term was used until replaced in 1959 with the term SMSA. See also consolidated metropolitan statistical area, metropolitan area, metropolitan statistical area, primary metropolitan statistical area, standard consolidated area, standard consolidated statistical area, standard metropolitan statistical area.

Standard metropolitan statistical area (SMSA) In 1959, the term SMSA replaced SMA for the official metropolitan areas defined by the then Bureau of the Budget. The term SMSA was used until MSAs, CMSAs, and PMSAs were introduced in 1983. See also consolidated metropolitan statistical area, metropolitan area, metropolitan statistical area, primary metropolitan statistical area, standard consolidated area, standard consolidated statistical area, standard metropolitan area.

State/state A type of governmental unit that is the primary legal subdivision of the United States; a functioning county equivalent in Palau, where it also serves as a nonfunctioning MCD.

State certifying official The State official designated annually by the Governor of each State to review and certify that the Census Bureau's inventory of local governmental units in that State is accurate, and that the boundary change actions reported in response to its BAS are accomplished in accordance with State law.

State code A two-digit FIPS code assigned by the NIST to identify each State and statistically equivalent entity. The NIST assigns the codes based on the alphabetic sequence of State names (Puerto Rico and the Outlying Areas appear at the end); it documents these codes in a FIPS publication (FIPS PUB 5). Also, a two-digit code assigned by the Census Bureau to identify each State within its census geographic division (Puerto Rico and the Outlying Areas appear at the end). See also division (census geographic), Federal Information Processing Standards, Geographic Identification Code Scheme.

State/County Outline Map A page-size, State-based map series depicting the boundaries and names of all counties and equivalent entities in a State.

State economic area (SEA) A group of adjacent counties within a State that have similar economic and social characteristics, as determined by various governmental agencies. An SEA may be a single metropolitan county with unique characteristics. SEAs are the lower level of a two-tiered system of county combinations that includes the economic subregions (ESRs). From 1950 through 1980, the Census Bureau tabulated decennial census data by SEA/ESR. See also economic subregion.

State equivalent A type of governmental unit treated by the Census Bureau as if it were a State for purposes of data presentation. For the 1990 decennial census, the State equivalents included the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands of the United States, American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and Palau. See also Outlying Area, State.

State/Metropolitan Area Outline Map A page-size, State-based map series displaying the boundaries and names of States, counties, and MAs; also shown are the location and name of the State capital, each MA central city, and other places with a population of 25,000 or more in the State.

Statistical Areas Committee (SAC) A committee composed of individuals representing the various divisions and staffs of the Census Bureau. The committee meets as needed to discuss proposals and problems related to the recognition and delineation of geographic entities used for data tabulation.

Statistical entity Any specially defined geographic entity or combination of entities, such as a block group, BNA, CCD, CDP, census tract, or UA, for which the Census Bureau tabulates data. Statistical entity boundaries are not legally defined and the entities have no governmental standing. See also administrative entity, governmental unit, legal entity, statistically equivalent entity.

Statistically equivalent entity A type of geographic entity that, for purposes of data tabulation and presentation, the Census Bureau treats as the counterpart of a similar type of entity; for example, in Louisiana (which has no counties) the parish is the statistical equivalent of a county. See also administrative entity, governmental unit, legal entity, statistical entity.

STF See Summary Tape File.

Subbarrio A legally defined nonfunctioning subdivision of a barrio-pueblo or barrio in Puerto Rico, which serves as an electoral and representational entity. See also barrio, barrio-pueblo, sub-MCD.

Sub-MCD A primary legal division of an MCD, found only in Puerto Rico. See also subbarrio.

Subreservation area (American Indian) See American Indian subreservation area.

Summary Tape File (STF) One of a series of computer files containing large amounts of decennial census data for the various levels of the Census Bureau's geographic hierarchy. See also 100-percent data, sample data.

Supervisor's district A nonfunctioning MCD found in Mississippi, used for the election of a member to the county board; in decennial censuses before 1990, the set of EDs for which one supervisor was responsible. The Census Bureau did not tabulate or publish data for supervisor's districts.

Survey See sample survey.

Survey township See public land survey system, township (congressional or survey), township and range system.

Tabulation block All blocks for which the Census Bureau tabulates decennial census data, either an unsplit census block, or each portion of a decennial census collection block that was split into two or more separately identified parts to recognize any legal, administrative, or statistical boundaries that transect it. For the 1990 census, a tabulation block was identified by a three-digit number and, when it consisted of the portion of a collection block delimited by some other boundary, a one- or two-character alphabetic suffix; earlier decennial censuses did not identify these portions of split blocks with unique suffixes. See also census block, collection block, collection geography, tabulation geography.

Tabulation geography The geographic entities for which the Census Bureau tabulates and presents data, such as States, counties, places, census tracts, and census blocks.

Tape address register (TAR) For the 1970, 1980, and 1990 decennial censuses, a computerized list of residential addresses created from a commercial mailing list and post office check. The extent of this file was restricted to the areas covered by the ACGs (for the 1970 census), the GBF/DIME Files (for the 1980 census), and the TIGER data base (for the 1990 census). The address information was supplemented by field-listed addresses that the lister geocoded because the computer could not geocode them.

TAR See tape address register.

TAZ See traffic analysis zone.

TDSA See tribal designated statistical area.

TIGER The acronym for Topologically Integrated Geographic Encoding and Referencing System. See also TIGER data base, TIGER System.

TIGER data base A computer file that contains geographic information representing the position of roads, rivers, railroads, and other census-required map features; the attributes associated with each feature, such as feature name, address ranges, and class codes; the position of the boundaries for those geographic areas that the Census Bureau uses in its data collection, processing, and tabulation operations; and the attributes associated with those areas, such as their names and codes. This file is stored in multiple partitions, such as by counties or groups of counties, although it represents all U.S. space (including Puerto Rico, and the Outlying Areas) as a single seamless data inventory. See also Geographic Support System, TIGER System.

TIGER File See TIGER data base.

TIGER System The TIGER data base plus the specifications, procedures, computer programs, and related source (input) materials required to build and use it. It also includes the specifications, procedures, and computer programs for using the TIGER data base to perform geocoding, plot maps, and generate tabulation control files such as the GRF. See also Geographic Support System, TIGER data base.

TJSA See tribal jurisdiction statistical area.

Topography In its broadest sense, topography includes landforms, water and other drainage features, and features such as gravel pits and mine tailings. A single feature (such as a mountain or valley) is called a topographic feature.

Topologically Integrated Geographic Encoding and Referencing System See TIGER data base, TIGER System.

Topology One component of the science of mathematics dealing with geometric configurations that do not vary when transformed through bending, stretching, or mapping at various scales.

Town A type of functioning MCD found in the New England States, New York, and Wisconsin; a type of incorporated place in 30 States and the Virgin Islands of the United States. In New Jersey, Pennsylvania, and South Dakota, the Census Bureau treats these towns as the equivalent of an MCD. See also county subdivision, dependent place, incorporated place, independent place.

Township (civil or governmental) A type of functioning MCD in 12 States, a type of nonfunctioning MCD in 3 States (Arkansas, New Hampshire, and North Carolina), and a type of county subdivision that can be functioning and nonfunctioning in Missouri. (There also are nonfunctioning survey townships in Maine, but these are not recognized by the Census Bureau for data tabulation purposes.) In States where land was subdivided under the PLSS, many townships correspond to the survey townships. See also county subdivision, minor civil division, public land survey system, township (congressional or survey), township and range system.

Township (congressional or survey) A unit of land created under the PLSS for the sale of public lands. A survey township is usually a six-square-mile area consisting of 36 one-square-mile sections aligned along cardinal compass points. Survey townships have not been used for decennial census tabulations in recent decades except where they are organized into a civil township; if unorganized, the area is treated as the statistical equivalent of an MCD, called an unorganized territory. See also organized territory, public land survey system, township (civil or governmental), township and range system, unorganized territory.

Township and range system A common name for the United States Public Land Survey System, which covers 29 whole States and part of Ohio. See also public land survey system, township (civil or governmental), township (congressional or survey).

Traffic analysis zone (TAZ) A special-purpose geographic entity delineated by an MPO for tabulating transportation statistics from the decennial census.

Transportation (census) See economic census.

Tribal designated statistical area (TDSA) A statistical entity delineated for the 1990 decennial census by an American Indian tribe recognized by the Federal Government or a State government when that tribe does not have a land base (reservation). It encompasses the area that includes the American Indian population over which the tribe has jurisdiction. A TDSA cannot overlap with a Federal or State reservation or American Indian trust land; it also cannot cross a State line, and must be delineated following census block boundaries. See also tribal jurisdiction statistical area.

Tribal jurisdiction statistical area (TJSA) A statistical area identified and delineated for the 1990 decennial census by American Indian tribal officials in Oklahoma. They encompass the area that includes the American Indian population over which the tribe has jurisdiction. TJSA's replaced the Historic Areas of Oklahoma recognized by the Census Bureau for the 1980 decennial census. See also Historic Areas of Oklahoma, tribal designated statistical area.

Tribal trust land See American Indian trust land.

UA See urbanized area.

UA code A four-digit numeric code assigned by the Census Bureau to identify UAs. See also Federal Information Processing Standards, Geographic Identification Code Scheme.

Undevelopable territory (urbanized area) Includes water areas, mud flats, swamps, marshlands, steep slopes, and other terrain on which residential or commercial development is virtually impossible because of physical limitations. Local zoning classifications of land do not necessarily correspond to the Census Bureau's definition of undevelopable land for the purpose of defining UAs. Territory that is undeveloped is not necessarily undevelopable. See also jump, jump corridor, urbanized area.

U.S. See United States

Unified district A school district inclusive of kindergarten through twelfth grade. See also school district.

Unincorporated place See census designated place.

United States The 50 States and the District of Columbia.

United States Geological Survey (USGS) A bureau of the U.S. Department of the Interior, the USGS is the Nation's main topographic mapping agency.

United States Postal Service (USPS) An independent corporation of the U.S. Government, the USPS provides mail processing and delivery services to individuals and businesses in the United States, Puerto Rico, and the Outlying Areas.

Unorganized borough A legal entity in Alaska, covering the portion of the State not within any legally established, organized borough; it is administered by the State of Alaska. The unorganized borough is subdivided into county-equivalent census areas for statistical purposes. See also borough, census area.

Unorganized territory (UT) The statistical equivalent of an MCD encompassing contiguous area that is not within any organized MCD or an incorporated place. The Census Bureau identified UTs in nine States for the 1990 census. See also county subdivision, minor civil division, organized territory, statistical entity, township (congressional or survey).

Urban All population and territory within the boundaries of UAs and the urban portion of places outside of UAs that have a decennial census population of 2,500 or more. See also extended city, rural, urban area, urbanized area, whole-town CDP.

Urban area For Census Bureau purposes, the territory within UAs and the urban portion of places outside of UAs that have a decennial census population of 2,500 or more. Other Federal Government agencies may define the term based on different criteria. See also extended city, rural, urban, urbanized area.

Urban fringe The closely settled territory adjacent to the central place(s) of a UA. The census blocks that constitute the urban fringe generally have an overall population density of at least 1,000 people per square mile of land area. See also population density, urbanized area.

Urban place Any place with a decennial census population of 2,500 or more, whether incorporated or census designated (a CDP), and any place regardless of population located within a UA. Some urban places (extended cities) contain territory that is not designated as urban. See also extended city, place, rural place, urbanized area.

Urbanized area (UA) An area consisting of a central place(s) and adjacent urban fringe that together have a minimum residential population of at least 50,000 people and generally an overall population density of at least 1,000 people per square mile of land area. The Census Bureau uses published criteria to determine the qualification and boundaries of UAs. See also central place, jump, jump corridor, nonresidential urban land use, population density, undevelopable territory, urban, urban area, urban fringe.

Urbanized Area Outline Map A small-scale map of each UA, showing the boundaries and names of the major component geographic entities (such as all AIANAs, county subdivisions, and places). Formatted at a scale of four miles to the inch, these maps appear in selected decennial census publications.

USGS See United States Geological Survey.

USPS See United States Postal Service.

UT See unorganized territory.

Village A type of incorporated place in 20 States and American Samoa. The Census Bureau treats all villages in New Jersey, South Dakota, and Wisconsin, and some villages in Ohio as county subdivisions. See also incorporated place, independent place.

Visible feature A feature that can be seen on the ground, such as a street or road, railroad track, power line, stream, shoreline, fence, ridge, or cliff. A visible feature can be a cultural or natural feature. See also cultural feature, feature, nonvisible feature.

Voting district (VTD) Any of a variety of areas, such as election districts, precincts, legislative districts, or wards, established by States and local governments for voting purposes. The 1990 census term voting district replaces the 1980 term election precinct. See also administrative entity, election precinct, precinct.

Voting District Outline Map A county-based map showing VTD names and codes, VTD boundaries and underlying features, boundaries and names of AIANAs, county subdivisions, and places. These maps are available only as electrostatic plots, and cover only those counties for which States delineated VTDs in the 1990 census.

VTD See voting district.

Ward A type of local electoral subdivision of an incorporated place or MCD; a type of MCD formerly recognized by the Census Bureau in Louisiana; officially called a police jury ward. See also voting district.

Wholesale trade (census) See economic census.

Whole-town CDP For the 1980 census only, a CDP coextensive with an MCD in one of the nine Northeastern States, Michigan, or Wisconsin. At least 95 percent of the MCD's population and 80 percent of its land area had to qualify as urban under the UA criteria. The Census Bureau did not tabulate data for this entity for the 1990 census.

ZIP (Zone Improvement Plan) Code A five-, seven-, nine-, or eleven-digit code assigned by the U.S. Postal Service to a section of a street, a collection of streets, an establishment, structure, or group of post office boxes, for the delivery of mail.

Zona Urbana (ZU) In Puerto Rico, the area consisting of the municipio seat of government and the adjacent built-up area. ZUs are delineated using a process similar to that for comunidades, except that ZUs have no minimum population threshold for qualification and cannot cross municipio boundaries. See also census designated place, comunidad.

Zone Improvement Plan (ZIP) See ZIP Code.

Population Characteristics, Housing Characteristics, and Derived Measures, from STF3 APPENDIX B, "Definitions of Subject Characteristics"

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AGE--The data on age were derived from answers to questionnaire item 5, which was asked of all persons. The age classification is based on the age of the person in complete years as of April 1, 1990. The age response in question 5a was used normally to represent a person's age. However, when the age response was unacceptable or unavailable, a person's age was derived from an acceptable year-of-birth response in question 5b.

Data on age are used to determine the applicability of other questions for a person and to classify other characteristics in census tabulations. Age data are needed to interpret most social and economic characteristics used to plan and examine many programs and policies. Therefore, age is tabulated by single years of age and by many different groupings, such as 5-year age groups.

Some tabulations are shown by the age of the householder. These data were derived from the age responses for each householder. (For more information on householder, see the discussion under "Household Type and Relationship.")

Median Age--This measure divides the age distribution into two equal parts: one-half of the cases falling below the median value and one-half above the value. Generally, median age is computed on the basis of more detailed age intervals than are shown in some census publications; thus, a median based on a less detailed distribution may differ slightly from a corresponding median for the same population based on a more detailed distribution. (For more information on medians, see the discussion under "Derived Measures.")

Limitation of the Data--Counts in 1970 and 1980 for persons 100 years old and over were substantially overstated. Improvements were made in the questionnaire design, in the allocation procedures, and to the respondent instruction guide to attempt to minimize this problem for the 1990 census.

Review of detailed 1990 census information indicated that respondents tended to provide their age as of the date of completion of the questionnaire, not their age as of April 1, 1990. In addition, there may have been a tendency for respondents to round their age up if they were close to having a birthday. It is likely that approximately 10 Percentage of Persons in most age groups are actually 1 year younger. For most single years of age, the misstatements are largely offsetting. The problem is most pronounced at age 0 because persons lost to age 1 may not have been fully offset by the inclusion of babies born after April 1, 1990, and because there may have been more rounding up to age 1 to avoid reporting age as 0 years. (Age in complete months was not collected for infants under age 1.)

The reporting of age 1 year older than age on April 1, 1990, is likely to have been greater in areas where the census data were collected later in 1990. The magnitude of this problem was much less in the three previous censuses where age was typically derived from respondent data on year of birth and quarter of birth. (For more information on the design of the age question, see the section below that discusses "Comparability.")

Comparability--Age data have been collected in every census. For the first time since 1950, the 1990 data are not available by quarter year of age. This change was made so that coded information could be obtained for both age and year of birth. In each census since 1940, the age of a person was assigned when it was not reported. In censuses before 1940, with the exception of 1880, persons of unknown age were shown as a separate category. Since 1960, assignment of unknown age has been performed by a general procedure described as "imputation." The specific procedures for imputing age have been different in each census. (For more information on imputation, see Appendix C, Accuracy of the Data.)

ANCESTRY--The data on ancestry were derived from answers to questionnaire item 13, which was asked of a sample of persons. The question was based on self-identification; the data on ancestry represent self-classification by people according to the ancestry group(s) with which they most closely identify. Ancestry refers to a person's ethnic origin or descent, "roots," or heritage or the place of birth of the person or the person's parents or ancestors

before their arrival in the United States. Some ethnic identities, such as "Egyptian" or "Polish" can be traced to geographic areas outside the United States, while other ethnicities such as "Pennsylvania Dutch" or "Cajun" evolved in the United States.

The intent of the ancestry question was not to measure the degree of attachment the respondent had to a particular ethnicity. For example, a response of "Irish" might reflect total involvement in an "Irish" community or only a memory of ancestors several generations removed from the individual.

The Census Bureau coded the responses through an automated review, edit, and coding operation. The open-ended write-in ancestry item was coded by subject-matter specialists into a numeric representation using a code list containing over 1,000 categories. The 1990 code list reflects the results of the Census Bureau's own research and consultations with many ethnic experts. Many decisions were made to determine the classification of responses. These decisions affected the grouping of the tabulated data. For example, the "Assyrian" category includes both responses of "Assyrian" and "Chaldean."

The ancestry question allowed respondents to report one or more ancestry groups. While a large number of respondents listed a single ancestry, the majority of answers included more than one ethnic entry. Generally, only the first two responses reported were coded in 1990. If a response was in terms of a dual ancestry, for example, Irish-English, the person was assigned two codes, in this case one for Irish and another for English.

However, in certain cases, multiple responses such as "French Canadian," "Scotch-Irish," "Greek Cypriote," and "Black Dutch" were assigned a single code reflecting their status as unique groups. If a person reported one of these unique groups in addition to another group, for example, "Scotch-Irish English," resulting in three terms, that person received one code for the unique group ("Scotch-Irish") and another one for the remaining group ("English"). If a person reported "English Irish French," only English and Irish were coded. Certain combinations of ancestries where the ancestry group is a part of another, such as "German-Bavarian," the responses were coded as a single ancestry using the smaller group ("Bavarian"). Also, responses such as "Polish-American" or "Italian-American" were coded and tabulated as a single entry ("Polish" or "Italian").

The Census Bureau accepted "American" as a unique ethnicity if it was given alone, with an ambiguous response, or with State names. If the respondent listed any other ethnic identity such as "Italian American," generally the "American" portion of the response was not coded. However, distinct groups such as "American Indian," "Mexican American," and "African American" were coded and identified separately because they represented groups who considered themselves different from those who reported as "Indian," "Mexican," or "African," respectively.

In all tabulations, when respondents provided an unacceptable ethnic identity (for example, an uncodeable or unintelligible response such as "multi-national," "adopted," or "I have no idea"), the answer was included in "Ancestry not reported."

The tabulations on ancestry are presented using two types of data presentations--one used total persons as the base, and the other used total responses as the base. The following are categories shown in the two data presentations:

Presentation Based on Persons:

Single Ancestries Reported--Includes all persons who reported only one ethnic group. Included in this category are persons with multiple-term responses such as "Scotch-Irish" who are assigned a single code.

Multiple Ancestries Reported--Includes all persons who reported more than one group and were assigned two ancestry codes.

Ancestry Unclassified--Includes all persons who provided a response that could not be assigned an ancestry code because they provided nonsensical entries or religious responses.

Presentations Based on Responses:

Total Ancestries Reported--Includes the total number of ancestries reported and coded. If a person reported a multiple ancestry such as "French Danish," that response was counted twice in the tabulations--once in the "French" category and again in the "Danish" category. Thus, the sum of the counts in this type of presentation is not the total population but the total of all responses.

First Ancestry Reported--Includes the first response of all persons who reported at least one codeable entry. For example, in this category, the count for "Danish" would include all those who reported only Danish and those who reported Danish first and then some other group.

Second Ancestry Reported--Includes the second response of all persons who reported a multiple ancestry. Thus, the count for "Danish" in this category includes all persons who reported Danish as the second response, regardless of the first response provided.

The Census Bureau identified hundreds of ethnic groups in the 1990 census. However, it was impossible to show information for every group in all census tabulations because of space constraints. Publications such as the 1990 CP-2, Social and Economic Characteristics and the 1990 CPH-3, Population and Housing Characteristics for Census Tracts and Block Numbering Areas reports show a limited number of groups based on the number reported and the advice received from experts. A more complete distribution of groups is presented in the 1990 Summary Tape File 4, supplementary reports, and a special subject report on ancestry. In addition, groups identified specifically in the questions on race and Hispanic origin (for example, Japanese, Laotian, Mexican, Cuban, and Spaniard), in general, are not shown

separately in ancestry tabulations.

Limitation of the Data--Although some experts consider religious affiliation a component of ethnic identity, the ancestry question was not designed to collect any information concerning religion. The Bureau of the Census is prohibited from collecting information on religion. Thus, if a religion was given as an answer to the ancestry question, it was coded as an "Other" response.

Comparability--A question on ancestry was first asked in the 1980 census. Although there were no comparable data prior to the 1980 census, related information on ethnicity was collected through questions on parental birthplace, own birthplace, and language which were included in previous censuses. Unlike other census questions, there was no imputation for nonresponse to the ancestry question.

In 1990, respondents were allowed to report more than one ancestry group; however, only the first two ancestry groups identified were coded. In 1980, the Census Bureau attempted to code a third ancestry for selected triple-ancestry responses.

New categories such as "Arab" and "West Indian" were added to the 1990 question to meet important data needs. The "West Indian" category excluded "Hispanic" groups such as "Puerto Rican" and "Cuban" that were identified primarily through the question on Hispanic origin. In 1990, the ancestry group, "American" is recognized and tabulated as a unique ethnicity. In 1980, "American" was tabulated but included under the category "Ancestry not specified."

A major improvement in the 1990 census was the use of an automated coding system for ancestry responses. The automated coding system used in the 1990 census greatly reduced the potential for error associated with a clerical review. Specialists with a thorough knowledge of the subject matter reviewed, edited, coded, and resolved inconsistent or incomplete responses.

CITIZENSHIP--The data on citizenship were derived from answers to questionnaire item 9, which was asked of a sample of persons.

Citizen--Persons who indicated that they were native-born and foreign-born persons who indicated that they have become naturalized. (For more information on native and foreign born, see the discussion under "Place of Birth.")

There are four categories of citizenship: (1) born in the United States, (2) born in Puerto Rico, Guam, the Virgin Islands of the United States, or the Commonwealth of the Northern Mariana Islands, (3) born abroad of American parents, and (4) citizen by naturalization.

Naturalized Citizen--Foreign-born persons who had completed the naturalization process at the time of the census and upon whom the rights of citizenship had been conferred.

Not a Citizen--Foreign-born persons who were not citizens, including

persons who had begun but not completed the naturalization process at the time of the census.

Limitation of the Data--Evaluation studies completed after previous censuses indicated that some persons may have reported themselves as citizens although they had not yet attained the status.

Comparability--Similar questions on citizenship were asked in the censuses of 1820, 1830, 1870, 1890 through 1950, 1970, and 1980. The 1980 question was asked of a sample of the foreign-born population. In 1990, both native and foreign-born persons who received the long-form questionnaire were asked to respond to the citizenship question.

EDUCATIONAL ATTAINMENT--Data on educational attainment were derived from answers to questionnaire item 12, which was asked of a sample of persons. Data are tabulated as attainment for persons 15 years old and over. Persons are classified according to the highest level of school completed or the highest degree received. The question included instructions to report the level of the previous grade attended or the highest degree received for persons currently enrolled in school. The question included response categories which allowed persons to report completing the 12th grade without receiving a high school diploma, and which instructed respondents to report as "high school graduate(s)"--persons who received either a high school diploma or the equivalent, for example, passed the Test of General Educational Development (G.E.D.), and did not attend college. (On the Military Census Report questionnaire, the lowest response category was "Less than 9th grade.")

Instructions included in the 1990 respondent instruction guide, which was mailed with the census questionnaire, further specified that schooling completed in foreign or ungraded school systems should be reported as the equivalent level of schooling in the regular American system; that vocational certificates or diplomas from vocational, trade, or business schools or colleges were not to be reported unless they were college level degrees; and that honorary degrees were not to be reported. The instructions gave "medicine, dentistry, chiropractic, optometry, osteopathic medicine, pharmacy, podiatry, veterinary medicine, law, and theology" as examples of professional school degrees, and specifically excluded "barber school, cosmetology, or other training for a specific trade" from the professional school category. The order in which they were listed suggested that doctorate degrees were "higher" than professional school degrees, which were "higher" than master's degrees.

Persons who did not report educational attainment were assigned the attainment of a person of the same age, race or Spanish origin, and sex who resided in the same or a nearby area. Persons who filled more than one circle were edited to the highest level or degree reported.

High School Graduate or Higher--Includes persons whose highest degree was a high school diploma or its equivalent, persons who attended college or professional school, and persons who received a college, university, or professional degree. Persons who reported completing the 12th grade but not receiving a diploma are not included.

Not Enrolled, Not High School Graduate--Includes persons of compulsory school attendance age or above who were not enrolled in school and were not high school graduates; these persons may be taken to be "high school dropouts." There is no restriction on when they "dropped out" of school, and they may have never attended high school.

In prior censuses, "Median school years completed" was used as a summary measure of educational attainment. In 1990, the median can only be calculated for groups of which less than half the members have attended college. "Percent high school graduate or higher" and "Percent bachelor's degree or higher" are summary measures which can be calculated from the present data and offer quite readily interpretable measures of differences between population subgroups. To make comparisons over time, "Percent high school graduate or higher" can be calculated and "Percent bachelor's degree or higher" can be approximated with data from previous censuses.

Comparability--From 1840 to 1930, the census measured educational attainment by means of a basic literacy question. In 1940, a single question was asked on highest grade of school completed. In the censuses of 1950 through 1980, a two-part question asking highest grade of school attended and whether that grade was finished was used to construct highest grade or year of school completed. For persons who have not attended college, the response categories in the 1990 educational attainment question should produce data which are comparable to data on highest grade completed from earlier censuses.

The response categories for persons who have attended college were modified from earlier censuses because there was some ambiguity in interpreting responses in terms of the number of years of college completed. For instance, it was not clear whether "completed the fourth year of college," "completed the senior year of college," and "college graduate" were synonymous. Research conducted shortly before the census suggests that these terms were more distinct in 1990 than in earlier decades, and this change may have threatened the ability to estimate the number of "college graduates" from the number of persons reported as having completed the fourth or a higher year of college. It was even more difficult to make inferences about post-baccalaureate degrees and "Associate" degrees from highest year of college completed. Thus, comparisons of post-secondary educational attainment in this and earlier censuses should be made with great caution.

In the 1960 and subsequent censuses, persons for whom educational attainment was not reported were assigned the same attainment level as a similar person whose residence was in the same or a nearby area. In the 1940 and 1950 censuses, persons for whom educational attainment was not reported were not allocated.

EMPLOYMENT STATUS--The data on employment status were derived from answers to questionnaire items 21, 25, and 26, which were asked of a sample of persons. The series of questions on employment status was asked of all persons 15 years old and over and was designed to identify, in this

sequence: (1) persons who worked at any time during the reference week; (2) persons who did not work during the reference week but who had jobs or businesses from which they were temporarily absent (excluding layoff); (3) persons on layoff; and (4) persons who did not work during the reference week, but who were looking for work during the last four weeks and were available for work during the reference week. (For more information, see the discussion under "Reference Week.")

The employment status data shown in this and other 1990 census tabulations relate to persons 16 years old and over. Some tabulations showing employment status, however, include persons 15 years old. By definition, these persons are classified as "Not in Labor Force." In the 1940, 1950, and 1960 censuses, employment status data were presented for persons 14 years old and over. The change in the universe was made in 1970 to agree with the official measurement of the labor force as revised in January 1967 by the U.S. Department of Labor. The 1970 census was the last to show employment data for persons 14 and 15 years old.

Employed--All civilians 16 years old and over who were either (1) "at work"--those who did any work at all during the reference week as paid employees, worked in their own business or profession, worked on their own farm, or worked 15 hours or more as unpaid workers on a family farm or in a family business; or (2) were "with a job but not at work"--those who did not work during the reference week but had jobs or businesses from which they were temporarily absent due to illness, bad weather, industrial dispute, vacation, or other personal reasons. Excluded from the employed are persons whose only activity consisted of work around the house or unpaid volunteer work for religious, charitable, and similar organizations; also excluded are persons on active duty in the United States Armed Forces.

Unemployed--All civilians 16 years old and over are classified as unemployed if they (1) were neither "at work" nor "with a job but not at work" during the reference week, and (2) were looking for work during the last 4 weeks, and (3) were available to accept a job. Also included as unemployed are civilians who did not work at all during the reference week and were waiting to be called back to a job from which they had been laid off. Examples of job seeking activities are:

Registering at a public or private employment office

Meeting with prospective employers

Investigating possibilities for starting a professional practice or opening a business

Placing or answering advertisements

Writing letters of application

Being on a union or professional register

Civilian Labor Force--Consists of persons classified as employed or

unemployed in accordance with the criteria described above.

Experienced Unemployed--These are unemployed persons who have worked at any time in the past.

Experienced Civilian Labor Force--Consists of the employed and the experienced unemployed.

Labor Force--All persons classified in the civilian labor force plus members of the U.S. Armed Forces (persons on active duty with the United States Army, Air Force, Navy, Marine Corps, or Coast Guard).

Not in Labor Force--All persons 16 years old and over who are not classified as members of the labor force. This category consists mainly of students, housewives, retired workers, seasonal workers enumerated in an off season who were not looking for work, institutionalized persons, and persons doing only incidental unpaid family work (less than 15 hours during the reference week).

Worker--This term appears in connection with several subjects: journey-to-work items, class of worker, weeks worked in 1989, and number of workers in family in 1989. Its meaning varies and, therefore, should be determined in each case by referring to the definition of the subject in which it appears.

Actual Hours Worked Last Week--All persons who reported working during the reference week were asked to report in questionnaire item 21b the number of hours that they worked. The statistics on hours worked pertain to the number of hours actually worked at all jobs, and do not necessarily reflect the number of hours typically or usually worked or the scheduled number of hours. The concept of "actual hours" differs from that of "usual hours" described below. The number of persons who worked only a small number of hours is probably understated since such persons sometimes consider themselves as not working. Respondents were asked to include overtime or extra hours worked, but to exclude lunch hours, sick leave, and vacation leave.

Limitation of the Data--The census may understate the number of employed persons because persons who have irregular, casual, or unstructured jobs sometimes report themselves as not working. The number of employed persons "at work" is probably overstated in the census (and conversely, the number of employed "with a job, but not at work" is understated) since some persons on vacation or sick leave erroneously reported themselves as working. This problem has no effect on the total number of employed persons. The reference week for the employment data is not the same for all persons. Since persons can change their employment status from one week to another, the lack of a uniform reference week may mean that the employment data do not reflect the reality of the employment situation of any given week. (For more information, see the discussion under "Reference Week.")

Comparability--The questionnaire items and employment status concepts for the 1990 census are essentially the same as those used in the 1980 and 1970 censuses. However, these concepts differ in many respects from those

associated with the 1950 and 1960 censuses.

Since employment data from the census are obtained from respondents in households, they differ from statistics based on reports from individual business establishments, farm enterprises, and certain government programs. Persons employed at more than one job are counted only once in the census and are classified according to the job at which they worked the greatest number of hours during the reference week. In statistics based on reports from business and farm establishments, persons who work for more than one establishment may be counted more than once. Moreover, some tabulations may exclude private household workers, unpaid family workers, and self-employed persons, but may include workers less than 16 years of age.

An additional difference in the data arises from the fact that persons who had a job but were not at work are included with the employed in the census statistics, whereas many of these persons are likely to be excluded from employment figures based on establishment payroll reports. Furthermore, the employment status data in census tabulations include persons on the basis of place of residence regardless of where they work, whereas establishment data report persons at their place of work regardless of where they live. This latter consideration is particularly significant when comparing data for workers who commute between areas.

Census data on actual hours worked during the reference week may differ from data from other sources. The census measures hours actually worked, whereas some surveys measure hours paid for by employers. Comparability of census actual hours worked data may also be affected by the nature of the reference week (see "Reference Week").

For several reasons, the unemployment figures of the Census Bureau are not comparable with published figures on unemployment compensation claims. For example, figures on unemployment compensation claims exclude persons who have exhausted their benefit rights, new workers who have not earned rights to unemployment insurance, and persons losing jobs not covered by unemployment insurance systems (including some workers in agriculture, domestic services, and religious organizations, and self-employed and unpaid family workers). In addition, the qualifications for drawing unemployment compensation differ from the definition of unemployment used by the Census Bureau. Persons working only a few hours during the week and persons with a job but not at work are sometimes eligible for unemployment compensation but are classified as "Employed" in the census. Differences in the geographical distribution of unemployment data arise because the place where claims are filed may not necessarily be the same as the place of residence of the unemployed worker.

The figures on employment status from the decennial census are generally comparable with similar data collected in the Current Population Survey. However, some difference may exist because of variations in enumeration and processing techniques.

FERTILITY--The data on fertility (also referred to as "children ever born")

were derived from answers to questionnaire item 20, which was asked of a sample of women 15 years old and over regardless of marital status. Stillbirths, stepchildren, and adopted children were excluded from the number of children ever born. Ever-married women were instructed to include all children born to them before and during their most recent marriage, children no longer living, and children away from home, as well as children who were still living in the home. Never-married women were instructed to include all children born to them.

Data are most frequently presented in terms of the aggregate number of children ever born to women in the specified category and in terms of the rate per 1,000 women. For purposes of calculating the aggregate, the open-ended response category, "12 or more" is assigned a value of 13.

Limitation of the Data--Although the data are assumed to be less complete for out-of-wedlock births than for births occurring within marriage, comparisons of 1980 census data on the fertility of single women with other census sources and administrative records indicate that no significant differences were found between different data sources; that is, 1980 census data on children ever born to single women were complete with no significant understatements of childbearing.

Comparability--The wording of the question on children ever born was the same in 1990 as in 1980. In 1970, however, the question on children ever born was asked of all ever-married women but only of never-married women who received self-administered questionnaires. Therefore, rates and numbers of children ever born to single women in 1970 may be understated. Data presented for children ever born to ever-married women are comparable for the 1990 census and all previous censuses containing this question.

GROUP QUARTERS--All persons not living in households are classified by the Census Bureau as living in group quarters. Two general categories of persons in group quarters are recognized:

- (1) institutionalized persons and
- (2) other persons in group quarters (also referred to as "noninstitutional group quarters").

Institutionalized Persons--Includes persons under formally authorized, supervised care or custody in institutions at the time of enumeration. Such persons are classified as "patients or inmates" of an institution regardless of the availability of nursing or medical care, the length of stay, or the number of persons in the institution. Generally, institutionalized persons are restricted to the institutional buildings and grounds (or must have passes or escorts to leave) and thus have limited interaction with the surrounding community. Also, they are generally under the care of trained staff who have responsibility for their safekeeping and supervision.

Type of Institution--The type of institution was determined as part of census enumeration activities. For institutions which specialize in only one specific type of service, all patients or inmates were given the same classification. For institutions which had multiple types of major services (usually general hospitals and Veterans' Administration

hospitals), patients were classified according to selected types of wards. For example, in psychiatric wards of hospitals, patients were classified in "mental (psychiatric) hospitals"; in hospital wards for persons with chronic diseases, patients were classified in "hospitals for the chronically ill." Each patient or inmate was classified in only one type of institution. Institutions include the following types:

Correctional Institutions--Includes prisons, Federal detention centers, military stockades and jails, police lockups, halfway houses, local jails, and other confinement facilities, including work farms.

Prisons--Where persons convicted of crimes serve their sentences. In some census products, the prisons are classified by two types of control:

(1) "Federal" (operated by the Bureau of Prisons of the Department of Justice) and (2) "State." Residents who are criminally insane were classified on the basis of where they resided at the time of enumeration: (1) in institutions (or hospital wards) operated by departments of correction or similar agencies; or

(2) in institutions operated by departments of mental health or similar agencies.

Federal Detention Centers--Operated by the Immigration and Naturalization Service (INS) and the Bureau of Prisons. These facilities include detention centers used by the Park Police; Bureau of Indian Affairs Detention Centers; INS Centers, such as the INS Federal Alien Detention Facility; INS Processing Centers; and INS Contract Detention Centers used to detain aliens under exclusion or deportation proceedings, as well as those aliens who have not been placed into proceedings, such as custodial required departures; and INS Detention Centers operated within local jails, and State and Federal prisons.

Military Stockades, Jails--Operated by military police and used to hold persons awaiting trial or convicted of violating military laws.

Local Jails and Other Confinement Facilities--Includes facilities operated by counties and cities that primarily hold persons beyond arraignment, usually for more than 48 hours. Also included in this category are work farms used to hold persons awaiting trial or serving time on relatively short sentences and jails run by private businesses under contract for local governments (but not by State governments).

Police Lockups--Temporary-holding facilities operated by county and city police that hold persons for 48 hours or less only if they have not been formally charged in court.

Halfway Houses--Operated for correctional purposes and include probation and restitution centers, pre-release centers, and community-residential centers.

Other Types of Correctional Institutions--Privately operated correctional facilities and correctional facilities specifically for alcohol/drug abuse.

Nursing Homes--Comprises a heterogeneous group of places. The majority of patients are elderly, although persons who require nursing care because of chronic physical conditions may be found in these homes regardless of their age. Included in this category are skilled-nursing facilities, intermediate-care facilities, long-term care rooms in wards or buildings on the grounds of hospitals, or long-term care rooms/nursing wings in congregate housing facilities.

Also included are nursing, convalescent, and rest homes, such as soldiers', sailors', veterans', and fraternal or religious homes for the aged, with or without nursing care. In some census products, nursing homes are classified by type of ownership as "Federal," "State," "Private not-for-profit," and "Private for profit."

Mental (Psychiatric) Hospitals--Includes hospitals or wards for the criminally insane not operated by a prison, and psychiatric wards of general hospitals and veterans' hospitals. Patients receive supervised medical/nursing care from formally-trained staff. In some census products, mental hospitals are classified by type of ownership as "Federal," "State or local," "Private," and "Ownership not known."

Hospitals for Chronically Ill--Includes hospitals for patients who require long-term care, including those in military hospitals and wards for the chronically ill located on military bases; or other hospitals or wards for the chronically ill, which include tuberculosis hospitals or wards, wards in general and Veterans' Administration hospitals for the chronically ill, neurological wards, hospices, wards for patients with Hansen's Disease (leprosy) and other incurable diseases, and other unspecified wards for the chronically ill. Patients who had no usual home elsewhere were enumerated as part of the institutional population in the wards of general and military hospitals. Most hospital patients are at the hospital temporarily and were enumerated at their usual place of residence. (For more information, see "Wards in General and Military Hospitals for Patients Who Have No Usual Home Elsewhere.")

Schools, Hospitals, or Wards for the Mentally Retarded--Includes those institutions such as wards in hospitals for the mentally retarded, and intermediate-care facilities for the mentally retarded that provide supervised medical/nursing care from formally-trained staff. In some census products, this category is classified by type of ownership as "Federal," "State or local," "Private," and "Ownership not known."

Schools, Hospitals, or Wards for the Physically Handicapped--Includes three types of institutions: institutions for the blind, those for the deaf, and orthopedic wards and institutions for the physically handicapped. Institutions for persons with speech problems are classified with "institutions for the deaf." The category "orthopedic

wards and institutions for the physically handicapped" includes those institutions providing relatively long-term care to accident victims, and to persons with polio, cerebral palsy, and muscular dystrophy. In some census products, this category is classified by type of ownership as "Public," "Private," and "Ownership not known."

Hospitals, and Wards for Drug/Alcohol Abuse--Includes hospitals, and hospital wards in psychiatric and general hospitals. These facilities are equipped medically and designed for the diagnosis and treatment of medical or psychiatric illnesses associated with alcohol or drug abuse. Patients receive supervised medical care from formally-trained staff.

Wards in General and Military Hospitals for Patients Who Have No Usual Home Elsewhere--Includes maternity, neonatal, pediatric (including wards for boarder babies), military, and surgical wards of hospitals, and wards for persons with infectious diseases.

Juvenile Institutions--Includes homes, schools, and other institutions providing care for children (short- or long-term care). Juvenile institutions include the following types:

Homes for Abused, Dependent, and Neglected Children--Includes orphanages and other institutions which provide long-term care (usually more than 30 days) for children. This category is classified in some census products by type of ownership as "Public" and "Private."

Residential Treatment Centers--Includes those institutions which primarily serve children who, by clinical diagnosis, are moderately or seriously disturbed emotionally. Also, these institutions provide long-term treatment services, usually supervised or directed by a psychiatrist.

Training Schools for Juvenile Delinquents--Includes residential training schools or homes, and industrial schools, camps, or farms for juvenile delinquents.

Public Training Schools for Juvenile Delinquents--Usually operated by a State agency (for example, department of welfare, corrections, or a youth authority). Some are operated by county and city governments. These public training schools are specialized institutions serving delinquent children, generally between the ages of 10 and 17 years old, all of whom are committed by the courts.

Private Training Schools--Operated under private auspices. Some of the children they serve are committed by the courts as delinquents. Others are referred by parents or social agencies because of delinquent behavior. One difference between private and public training schools is that, by their administrative policy, private schools have control over their selection and intake.

Detention Centers--Includes institutions providing short-term care (usually 30 days or less) primarily for delinquent children pending disposition of their cases by a court. This category also covers diagnostic centers. In

practice, such institutions may be caring for both delinquent and neglected children pending court disposition.

Other Persons in Group Quarters (also referred to as "noninstitutional group quarters")--Includes all persons who live in group quarters other than institutions. Persons who live in the following living quarters are classified as "other persons in group quarters" when there are 10 or more unrelated persons living in the unit; otherwise, these living quarters are classified as housing units.

Rooming Houses--Includes persons residing in rooming and boarding houses and living in quarters with 10 or more unrelated persons.

Group Homes--Includes "community-based homes" that provide care and supportive services. Such places include homes for the mentally ill, mentally retarded, and physically handicapped; drug/alcohol halfway houses; communes; and maternity homes for unwed mothers.

Homes for the Mentally Ill--Includes community-based homes that provide care primarily for the mentally ill. In some data products, this category is classified by type of ownership as "Federal," "State," "Private," and "Ownership not known." Homes which combine treatment of the physically handicapped with treatment of the mentally ill are counted as homes for the mentally ill.

Homes for the Mentally Retarded--Includes community-based homes that provide care primarily for the mentally retarded. Homes which combine treatment of the physically handicapped with treatment of the mentally retarded are counted as homes for the mentally retarded. This category is classified by type of ownership in some census products, as "Federal," "State," "Private," or "Ownership not known."

Homes for the Physically Handicapped--Includes community-based homes for the blind, for the deaf, and other community-based homes for the physically handicapped. Persons with speech problems are classified with homes for the deaf. In some census products, this category is classified by type of ownership as "Public," "Private," or "Ownership not known."

Homes or Halfway Houses for Drug/Alcohol Abuse--Includes persons with no usual home elsewhere in places that provide community-based care and supportive services to persons suffering from a drug/alcohol addiction and to recovering alcoholics and drug abusers. Places providing community-based care for drug and alcohol abusers include group homes, detoxification centers, quarterway houses (residential treatment facilities that work closely with accredited hospitals), halfway houses, and recovery homes for ambulatory, mentally competent recovering alcoholics and drug abusers who may be re-entering the work force.

Maternity Homes for Unwed Mothers--Includes persons with no usual home elsewhere in places that provide domestic care for unwed mothers and their children. These homes may provide social services and post-natal care within the facility, or may make arrangements for women to receive such services in the community. Nursing services are usually available in the facility.

Other Group Homes--Includes persons with no usual home elsewhere in communes, foster care homes, and job corps centers with 10 or more unrelated persons. These types of places provide communal living quarters, generally for persons who have formed their own community in which they have common interests and often share or own property jointly.

Religious Group Quarters--Includes, primarily, group quarters for nuns teaching in parochial schools and for priests living in rectories. It also includes other convents and monasteries, except those associated with a general hospital or an institution.

College Quarters Off Campus--Includes privately-owned rooming and boarding houses off campus, if the place is reserved exclusively for occupancy by college students and if there are 10 or more unrelated persons. In census products, persons in this category are classified as living in a college dormitory.

Persons residing in certain other types of living arrangements are classified as living in "noninstitutional group quarters" regardless of the number of people sharing the unit. These include persons residing in the following types of group quarters:

College Dormitories--Includes college students in dormitories (provided the dormitory is restricted to students who do not have their families living with them), fraternity and sorority houses, and on-campus residential quarters used exclusively for those in religious orders who are attending college. Students in privately-owned rooming and boarding houses off campus are also included, if the place is reserved exclusively for occupancy by college-level students and if there are 10 or more unrelated persons.

Military Quarters--Includes military personnel living in barracks and dormitories on base, in transient quarters on base for temporary residents (both civilian and military), and on military ships. However, patients in military hospitals receiving treatment for chronic diseases or who had no usual home elsewhere, and persons being held in military stockades were included as part of the institutional population.

Agriculture Workers' Dormitories--Includes persons in migratory farm workers' camps on farms, bunkhouses for ranch hands, and other dormitories on farms, such as those on "tree farms."

Other Workers' Dormitories--Includes persons in logging camps, construction workers' camps, firehouse dormitories, job-training camps, energy enclaves (Alaska only), and nonfarm migratory workers' camps (for example, workers in mineral and mining camps).

Emergency Shelters for Homeless Persons (with sleeping facilities) and Visible in Street Locations--Includes persons enumerated during the "Shelter-and-Street-Night" operation primarily on March 20-21, 1990. Enumerators were instructed not to ask if a person was "homeless." If a person was at one of the locations below on March

20-21, the person was counted as described below. (For more information on the "Shelter-and-Street-Night" operation, see Appendix D, Collection and Processing Procedures.) This category is divided into four classifications:

Emergency Shelters for Homeless Persons (with sleeping facilities)--Includes persons who stayed overnight on March 20, 1990, in permanent and temporary emergency housing, missions, hotels/motels, and flophouses charging \$12 or less (excluding taxes) per night; Salvation Army shelters, hotels, and motels used entirely for homeless persons regardless of the nightly rate charged; rooms in hotels and motels used partially for the homeless; and similar places known to have persons who have no usual home elsewhere staying overnight. If not shown separately, shelters and group homes that provide temporary sleeping facilities for runaway, neglected, and homeless children are included in this category in data products.

Shelters for Runaway, Neglected, and Homeless Children--Includes shelters/group homes which provide temporary sleeping facilities for juveniles.

Visible in Street Locations--Includes street blocks and open public locations designated before March 20, 1990, by city and community officials as places where the homeless congregate at night. All persons found at predesignated street sites from 2 a.m. to 4 a.m. and leaving abandoned or boarded-up buildings from 4 a.m. to 8 a.m. on March 21, 1990, were enumerated during "street" enumeration, except persons in uniform such as police and persons engaged in obvious money-making activities other than begging or panhandling. Enumerators were instructed not to ask if a person was "homeless."

This cannot be considered a complete count of all persons living on the streets because those who were so well hidden that local people did not know where to find them were likely to have been missed as were persons moving about or in places not identified by local officials. It is also possible that persons with homes could have been included in the count of "visible in street locations" if they were present when the enumerator did the enumeration of a particular block.

Predesignated street sites include street corners, parks, bridges, persons emerging from abandoned and boarded-up buildings, noncommercial campsites (tent cities), all-night movie theaters, all-night restaurants, emergency hospital waiting rooms, train stations, airports, bus depots, and subway stations.

Shelters for Abused Women (Shelters Against Domestic Violence or Family Crisis Centers)--Includes community-based homes or shelters that provide domiciliary care for women who have sought shelter from family violence and who may have been physically abused. Most shelters also provide care for children of abused women. These shelters may provide social services, meals, psychiatric treatment, and counseling. In some census products, "shelters for abused women" are included in the category "other noninstitutional group quarters."

Dormitories for Nurses and Interns in General and Military Hospitals--Includes group quarters for nurses and other staff members. It excludes patients.

Crews of Maritime Vessels--Includes officers, crew members, and passengers of maritime U.S. flag vessels. All ocean-going and Great Lakes ships are included.

Staff Residents of Institutions--Includes staff residing in group quarters on institutional grounds who provide formally-authorized, supervised care or custody for the institutionalized population.

Other Nonhousehold Living Situations--Includes persons with no usual home elsewhere enumerated during transient or "T-Night" enumeration at YMCA's, YWCA's, youth hostels, commercial and government-run campgrounds, campgrounds at racetracks, fairs, and carnivals, and similar transient sites.

Living Quarters for Victims of Natural Disasters--Includes living quarters for persons temporarily displaced by natural disasters.

Limitation of the Data--Two types of errors can occur in the classification of "types of group quarters":

Misclassification of Group Quarters--During the 1990 Special Place Prelist operation, the enumerator determined the type of group quarters associated with each special place in their assignment. The enumerator used the Alphabetical Group Quarters Code List and Index to the Alphabetical Group Quarters Code List to assign a two-digit code number followed by either an "I," for institutional, or an "N," for noninstitutional to each group quarters. In 1990, unacceptable group quarter codes were edited. (For more information on editing of unacceptable data, see Appendix C, Accuracy of the Data.)

No Classification (unknowns)--The imputation rate for type of institution was higher in 1980 (23.5 percent) than in 1970 (3.3 percent). Improvements were made to the 1990 Alphabetical Group Quarters Code List; that is, the inclusion of more group quarters categories and an "Index to the Alphabetical Group Quarters Code List." (For more information on the allocation rates for Type of Institution, see the allocation rates in 1990 CP-1, General Population Characteristics.)

In previous censuses, allocation rates for demographic characteristics (such as age, sex, race, and marital status) of the institutional population were similar to those for the total population. The allocation rates for sample characteristics such as school enrollment, highest grade completed, income, and veteran status for the institutional and noninstitutional group quarters population have been substantially higher than the population in households at least as far back as the 1960 census. The data, however, have historically presented a reasonable picture of the institutional and noninstitutional group quarters population.

Shelter and Street Night (S-Night)--For the 1990 census "Shelter-and-Street-Night" operation, persons well hidden, moving about, or in locations enumerators did not visit were likely to be missed. The number of people missed will never be known; thus, the 1990 census cannot be considered to include a definitive count of America's total homeless population. It does, however, give an idea of relative differences among areas of the country. Other components were counted as part of regular census procedures.

The count of persons in shelters and visible on the street could have been affected by many factors. How much the factors affected the count can never be answered definitively, but some elements include:

How well enumerators were trained and how well they followed procedures.

How well the list of shelter and street locations given to the Census Bureau by the local government reflected the actual places that homeless persons stay at night.

Cities were encouraged to open temporary shelters for census night, and many did that and actively encouraged people to enter the shelters. Thus, people who may have been on the street otherwise were in shelters the night of March 20, so that the ratio of shelter-to-street population could be different than usual.

The weather, which was unusually cold in some parts of the country, could affect how likely people were to seek emergency shelter or to be more hidden than usual if they stayed outdoors.

The media occasionally interfered with the ability to do the count.

How homeless people perceived the census and whether they wanted to be counted or feared the census and hid from it.

The Census Bureau conducted two assessments of Shelter and Street Night: (1) the quality of the lists of shelters used for the Shelter-and-Street-Night operation, and (2) how well procedures were followed by census-takers for the street count in parts of five cities (Chicago, Los Angeles, New Orleans, New York, and Phoenix). Information about these two assessments is available from the Chief, Center for Survey Methods Research, Bureau of the Census, Washington, DC 20233.

Comparability--For the 1990 census, the definition of institutionalized persons was revised so that the definition of "care" only includes persons under organized medical or formally-authorized, supervised care or custody. As a result of this change to the institutional definition, maternity homes are classified as noninstitutional rather than institutional group quarters as in previous censuses. The following types of other group quarters are classified as institutional rather than noninstitutional group quarters: "halfway houses (operated for correctional purposes)" and "wards in general and military hospitals for patients who have no usual home elsewhere," which includes maternity, neonatal, pediatric, military, and surgical wards of hospitals, other-purpose wards of hospitals, and wards for

infectious diseases. These changes should not significantly affect the comparability of data with earlier censuses because of the relatively small number of persons involved.

As in 1980, 10 or more unrelated persons living together were classified as living in noninstitutional group quarters. In 1970, the criteria was six or more unrelated persons.

Several changes also have occurred in the identification of specific types of group quarters. For the first time, the 1990 census identifies separately the following types of correctional institutions: persons in halfway houses (operated for correctional purposes), military stockades and jails, and police lockups. In 1990, tuberculosis hospitals or wards are included with hospitals for the chronically ill; in 1980, they were shown separately. For 1990, the noninstitutional group quarters category, "Group homes" is further classified as: group homes for drug/alcohol abuse; maternity homes (for unwed mothers), group homes for the mentally ill, group homes for the mentally retarded, and group homes for the physically handicapped. Persons living in communes, foster-care homes, and job corps centers are classified with "Other group homes" only if 10 or more unrelated persons share the unit; otherwise, they are classified as housing units.

In 1990, workers' dormitories were classified as group quarters regardless of the number of persons sharing the dorm. In 1980, 10 or more unrelated persons had to share the dorm for it to be classified as a group quarters. In 1960, data on persons in military barracks were shown only for men. In subsequent censuses, they include both men and women.

In 1990 census data products, the phrase "inmates of institutions" was changed to "institutionalized persons." Also, persons living in noninstitutional group quarters were referred to as "other persons in group quarters," and the phrase "staff residents" was used for staff living in institutions.

In 1990, there are additional institutional categories and noninstitutional group quarters categories compared with the 1980 census. The institutional categories added include "hospitals and wards for drug/alcohol abuse" and "military hospitals for the chronically ill." The noninstitutional group quarters categories added include emergency shelters for homeless persons; shelters for runaway, neglected, and homeless children; shelters for abused women; and visible-in-street locations. Each of these noninstitutional group quarters categories was enumerated on March 20-21, 1990, during the "Shelter-and-Street-Night" operation. (For more information on the "Shelter-and-Street-Night" operation, see Appendix D, Collection and Processing Procedures.)

HISPANIC ORIGIN--The data on Spanish/Hispanic origin were derived from answers to questionnaire item 7, which was asked of all persons. Persons of Hispanic origin are those who classified themselves in one of the specific Hispanic origin categories listed on the questionnaire--"Mexican," "Puerto Rican," or "Cuban"--as well as those who indicated that they were of "other Spanish/Hispanic" origin. Persons of "Other Spanish/Hispanic"

origin are those whose origins are from Spain, the Spanish-speaking countries of Central or South America, or the Dominican Republic, or they are persons of Hispanic origin identifying themselves generally as Spanish, Spanish-American, Hispanic, Hispano, Latino, and so on. Write-in responses to the "other Spanish/Hispanic" category were coded only for sample data.

Origin can be viewed as the ancestry, nationality group, lineage, or country of birth of the person or the person's parents or ancestors before their arrival in the United States. Persons of Hispanic origin may be of any race.

Some tabulations are shown by the Hispanic origin of the householder. In all cases where households, families, or occupied housing units are classified by Hispanic origin, the Hispanic origin of the householder is used. (See the discussion of householder under "Household Type and Relationship.")

During direct interviews conducted by enumerators, if a person could not provide a single origin response, he or she was asked to select, based on self-identification, the group which best described his or her origin or descent. If a person could not provide a single group, the origin of the person's mother was used. If a single group could not be provided for the person's mother, the first origin reported by the person was used.

If any household member failed to respond to the Spanish/Hispanic origin question, a response was assigned by the computer according to the reported entries of other household members by using specific rules of precedence of household relationship. In the processing of sample questionnaires, responses to other questions on the questionnaire, such as ancestry and place of birth, were used to assign an origin before any reference was made to the origin reported by other household members. If an origin was not entered for any household member, an origin was assigned from another household according to the race of the householder. This procedure is a variation of the general imputation process described in Appendix C, Accuracy of the Data.

Comparability--There may be differences between the total Hispanic origin population based on 100-percent tabulations and sample tabulations. Such differences are the result of sampling variability, nonsampling error, and more extensive edit procedures for the Spanish/Hispanic origin item on the sample questionnaires. (For more information on sampling variability and nonsampling error, see Appendix C, Accuracy of the Data.)

The 1990 data on Hispanic origin are generally comparable with those for the 1980 census. However, there are some differences in the format of the Hispanic origin question between the two censuses. For 1990, the word "descent" was deleted from the 1980 wording. In addition, the term "Mexican-Amer." used in 1980 was shortened further to "Mexican-Am." to reduce misreporting (of "American") in this category detected in the 1980 census. Finally, the 1990 question allowed those who reported as "other Spanish/Hispanic" to write in their specific Hispanic origin group.

Misreporting in the "Mexican-Amer." category of the 1980 census item on Spanish/Hispanic origin may affect the comparability of 1980 and 1990 census data for persons of Hispanic origin for certain areas of the country. An evaluation of the 1980 census item on Spanish/Hispanic origin indicated that there was misreporting in the Mexican origin category by White and Black persons in certain areas. The study results showed evidence that the misreporting occurred in the South (excluding Texas), the Northeast (excluding the New York City area), and a few States in the Midwest Region. Also, results based on available data suggest that the impact of possible misreporting of Mexican origin in the 1980 census was severe in those portions of the above-mentioned regions where the Hispanic origin population was generally sparse. However, national 1980 census data on the Mexican origin population or total Hispanic origin population at the national level was not seriously affected by the reporting problem. (For a more detailed discussion of the evaluation of the 1980 census Spanish/Hispanic origin item, see the 1980 census Supplementary Reports.)

The 1990 and 1980 census data on the Hispanic population are not directly comparable with 1970 Spanish origin data because of a number of factors: (1) overall improvements in the 1980 and 1990 censuses, (2) better coverage of the population, (3) improved question designs, and (4) an effective public relations campaign by the Census Bureau with the assistance of national and community ethnic groups.

Specific changes in question design between the 1980 and 1970 censuses included the placement of the category "No, not Spanish/Hispanic" as the first category in that question. (The corresponding category appeared last in the 1970 question.) Also, the 1970 category "Central or South American" was deleted because in 1970 some respondents misinterpreted the category; furthermore, the designations "Mexican-American" and "Chicano" were added to the Spanish/Hispanic origin question in 1980. In the 1970 census, the question on Spanish origin was asked of only a 5-percent sample of the population.

HOUSEHOLD TYPE AND RELATIONSHIP

Household--A household includes all the persons who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements.

In 100-percent tabulations, the count of households or householders always equals the count of occupied housing units. In sample tabulations, the numbers may differ as a result of the weighting process.

Persons Per Household--A measure obtained by dividing the number of persons

in households by the number of households (or householders). In cases where persons in households are cross-classified by race or Hispanic origin, persons in the household are classified by the race or Hispanic origin of the householder rather than the race or Hispanic origin of each individual.

Relationship to Householder

Householder--The data on relationship to householder were derived from answers to questionnaire item 2, which was asked of all persons in housing units. One person in each household is designated as the householder. In most cases, this is the person, or one of the persons, in whose name the home is owned, being bought, or rented and who is listed in column 1 of the census questionnaire. If there is no such person in the household, any adult household member 15 years old and over could be designated as the householder.

Households are classified by type according to the sex of the householder and the presence of relatives. Two types of householders are distinguished: a family householder and a nonfamily householder. A family householder is a householder living with one or more persons related to him or her by birth, marriage, or adoption. The householder and all persons in the household related to him or her are family members. A nonfamily householder is a householder living alone or with nonrelatives only.

Spouse--Includes a person married to and living with a householder. This category includes persons in formal marriages, as well as persons in common-law marriages.

The number of spouses is equal to the number of "married-couple families" or "married-couple households" in 100-percent tabulations. The number of spouses, however, is generally less than half of the number of "married persons with spouse present" in sample tabulations, since more than one married couple can live in a household, but only spouses of householders are specifically identified as "spouse." For sample tabulations, the number of "married persons with spouse present" includes married-couple subfamilies and married-couple families.

Child--Includes a son or daughter by birth, a stepchild, or adopted child of the householder, regardless of the child's age or marital status. The category excludes sons-in-law, daughters-in-law, and foster children.

Natural-Born or Adopted Son/Daughter--A son or daughter of the householder by birth, regardless of the age of the child. Also, this category includes sons or daughters of the householder by legal adoption, regardless of the age of the child. If the stepson/stepdaughter of the householder has been legally adopted by the householder, the child is still classified as a stepchild.

Stepson/Stepdaughter--A son or daughter of the householder through marriage but not by birth, regardless of the age of the child. If the stepson/stepdaughter of the householder has been legally adopted by the householder, the child is still classified as a stepchild.

Own Child--A never-married child under 18 years who is a son or daughter by birth, a stepchild, or an adopted child of the householder. In certain tabulations, own children are further classified as living with two parents or with one parent only. Own children of the householder living with two parents are by definition found only in married-couple families.

In a subfamily, an "own child" is a never-married child under 18 years of age who is a son, daughter, stepchild, or an adopted child of a mother in a mother-child subfamily, a father in a father-child subfamily, or either spouse in a married-couple subfamily.

"Related children" in a family include own children and all other persons under 18 years of age in the household, regardless of marital status, who are related to the householder, except the spouse of the householder. Foster children are not included since they are not related to the householder.

Other Relatives--In tabulations, includes any household member related to the householder by birth, marriage, or adoption, but not included specifically in another relationship category. In certain detailed tabulations, the following categories may be shown:

Grandchild--The grandson or granddaughter of the householder.

Brother/Sister--The brother or sister of the householder, including stepbrothers, stepsisters, and brothers and sisters by adoption. Brothers-in-law and sisters-in-law are included in the "Other relative" category on the questionnaire.

Parent--The father or mother of the householder, including a stepparent or adoptive parent. Fathers-in-law and mothers-in-law are included in the "Other relative" category on the questionnaire.

Other Relatives--Anyone not listed in a reported category above who is related to the householder by birth, marriage, or adoption (brother-in-law, grandparent, nephew, aunt, mother-in-law, daughter-in-law, cousin, and so forth).

Nonrelatives--Includes any household member, including foster children not related to the householder by birth, marriage, or adoption. The following categories may be presented in more detailed tabulations:

Roomer, Boarder, or Foster Child--Roomer, boarder, lodger, and foster children or foster adults of the householder.

Housemate or Roommate--A person who is not related to the householder and who shares living quarters primarily in order to share expenses.

Unmarried Partner--A person who is not related to the householder, who shares living quarters, and who has a close personal relationship with the householder.

Other Nonrelatives--A person who is not related by birth, marriage, or adoption to the householder and who is not described by the categories

given above.

When relationship is not reported for an individual, it is imputed according to the responses for age, sex, and marital status for that person while maintaining consistency with responses for other individuals in the household. (For more information on imputation, see Appendix C, Accuracy of the Data.)

Unrelated Individual--An unrelated individual is: (1) a householder living alone or with nonrelatives only, (2) a household member who is not related to the householder, or (3) a person living in group quarters who is not an inmate of an institution.

Family Type--A family consists of a householder and one or more other persons living in the same household who are related to the householder by birth, marriage, or adoption. All persons in a household who are related to the householder are regarded as members of his or her family. A household can contain only one family for purposes of census tabulations. Not all households contain families since a household may comprise a group of unrelated persons or one person living alone.

Families are classified by type as either a "married-couple family" or "other family" according to the sex of the householder and the presence of relatives. The data on family type are based on answers to questions on sex and relationship which were asked on a 100-percent basis.

Married-Couple Family--A family in which the householder and his or her spouse are enumerated as members of the same household.

Other Family:

Male Householder, No Wife Present--A family with a male householder and no spouse of householder present.

Female Householder, No Husband Present--A family with a female householder and no spouse of householder present.

Persons Per Family--A measure obtained by dividing the number of persons in families by the total number of families (or family householders). In cases where the measure, "persons in family" or "persons per family" are cross-tabulated by race or Hispanic origin, the race or Hispanic origin refers to the householder rather than the race or Hispanic origin of each individual.

Subfamily--A subfamily is a married couple (husband and wife enumerated as members of the same household) with or without never-married children under 18 years old, or one parent with one or more never-married children under 18 years old, living in a household and related to, but not including, either the householder or the householder's spouse. The number of subfamilies is not included in the count of families, since subfamily members are counted as part of the householder's family.

Subfamilies are defined during processing of sample data. In selected tabulations, subfamilies are further classified by type: married-couple

subfamilies, with or without own children; mother-child subfamilies; and father-child subfamilies.

Lone parents include people maintaining either one-parent families or one-parent subfamilies. Married couples include husbands and wives in both married-couple families and married-couple subfamilies.

Unmarried-Partner Household--An unmarried-partner household is a household other than a "married-couple household" that includes a householder and an "unmarried partner." An "unmarried partner" can be of the same sex or of the opposite sex of the householder. An "unmarried partner" in an "unmarried-partner household" is an adult who is unrelated to the householder, but shares living quarters and has a close personal relationship with the householder.

Unmarried-Couple Household--An unmarried-couple household is composed of two unrelated adults of the opposite sex (one of whom is the householder) who share a housing unit with or without the presence of children under 15 years old.

Foster Children--Foster children are nonrelatives of the householder and are included in the category, "Roomer, boarder, or foster child" on the questionnaire. Foster children are identified as persons under 18 years old and living in households that have no nonrelatives 18 years old and over (who might be parents of the nonrelatives under 18 years old).

Stepfamily--A stepfamily is a "married-couple family" with at least one stepchild of the householder present, where the householder is the husband.

Comparability--The 1990 definition of a household is the same as that used in 1980. The 1980 relationship category "Son/daughter" has been replaced by two categories, "Natural-born or adopted son/daughter" and "Stepson/stepdaughter." "Grandchild" has been added as a separate category. The 1980 nonrelative categories: "Roomer, boarder" and "Partner, roommate" have been replaced by the categories "Roomer, boarder, or foster child," "Housemate, roommate," and "Unmarried partner." The 1980 nonrelative category "Paid employee" has been dropped.

INCOME IN 1989--The data on income in 1989 were derived from answers to questionnaire items 32 and 33. Information on money income received in the calendar year 1989 was requested from persons 15 years old and over. "Total income" is the algebraic sum of the amounts reported separately for wage or salary income; net nonfarm self-employment income; net farm self-employment income; interest, dividend, or net rental or royalty income; Social Security or railroad retirement income; public assistance or welfare income; retirement or disability income; and all other income. "Earnings" is defined as the algebraic sum of wage or salary income and net income from farm and nonfarm self-employment. "Earnings" represent the amount of income received regularly before deductions for personal income taxes, Social Security, bond purchases, union dues, medicare deductions, etc.

Receipts from the following sources are not included as income: money

received from the sale of property (unless the recipient was engaged in the business of selling such property); the value of income "in kind" from food stamps, public housing subsidies, medical care, employer contributions for persons, etc.; withdrawal of bank deposits; money borrowed; tax refunds; exchange of money between relatives living in the same household; gifts and lump-sum inheritances, insurance payments, and other types of lump-sum receipts.

Income Type in 1989--The eight types of income reported in the census are defined as follows:

Wage or Salary Income--Includes total money earnings received for work performed as an employee during the calendar year 1989. It includes wages, salary, Armed Forces pay, commissions, tips, piece-rate payments, and cash bonuses earned before deductions were made for taxes, bonds, pensions, union dues, etc.

Nonfarm Self-Employment Income--Includes net money income (gross receipts minus expenses) from one's own business, professional enterprise, or partnership. Gross receipts include the value of all goods sold and services rendered. Expenses includes costs of goods purchased, rent, heat, light, power, depreciation charges, wages and salaries paid, business taxes (not personal income taxes), etc.

Farm Self-Employment Income--Includes net money income (gross receipts minus operating expenses) from the operation of a farm by a person on his or her own account, as an owner, renter, or sharecropper. Gross receipts include the value of all products sold, government farm programs, money received from the rental of farm equipment to others, and incidental receipts from the sale of wood, sand, gravel, etc. Operating expenses include cost of feed, fertilizer, seed, and other farming supplies, cash wages paid to farmhands, depreciation charges, cash rent, interest on farm mortgages, farm building repairs, farm taxes (not State and Federal personal income taxes), etc. The value of fuel, food, or other farm products used for family living is not included as part of net income.

Interest, Dividend, or Net Rental Income--Includes interest on savings or bonds, dividends from stockholdings or membership in associations, net income from rental of property to others and receipts from boarders or lodgers, net royalties, and periodic payments from an estate or trust fund.

Social Security Income--Includes Social Security pensions and survivors benefits and permanent disability insurance payments made by the Social Security Administration prior to deductions for medical insurance, and railroad retirement insurance checks from the U.S. Government. Medicare reimbursements are not included.

Public Assistance Income--Includes: (1) supplementary security income payments made by Federal or State welfare agencies to low income persons who are aged (65 years old or over), blind, or disabled; (2) aid to families with dependent children, and (3) general assistance. Separate payments received for hospital or other medical care (vendor payments)

are excluded from this item.

Retirement or Disability Income--Includes: (1) retirement pensions and survivor benefits from a former employer, labor union, or Federal, State, county, or other governmental agency; (2) disability income from sources such as worker's compensation; companies or unions; Federal, State, or local government; and the U.S. military; (3) periodic receipts from annuities and insurance; and (4) regular income from IRA and KEOGH plans.

All Other Income--Includes unemployment compensation, Veterans Administration (VA) payments, alimony and child support, contributions received periodically from persons not living in the household, military family allotments, net gambling winnings, and other kinds of periodic income other than earnings.

Income of Households--Includes the income of the householder and all other persons 15 years old and over in the household, whether related to the householder or not. Because many households consist of only one person, average household income is usually less than average family income.

Income of Families and Persons--In compiling statistics on family income, the incomes of all members 15 years old and over in each family are summed and treated as a single amount. However, for persons 15 years old and over, the total amounts of their own incomes are used. Although the income statistics covered the calendar year 1989, the characteristics of persons and the composition of families refer to the time of enumeration (April 1990). Thus, the income of the family does not include amounts received by persons who were members of the family during all or part of the calendar year 1989 if these persons no longer resided with the family at the time of enumeration. Yet, family income amounts reported by related persons who did not reside with the family during 1989 but who were members of the family at the time of enumeration are included. However, the composition of most families was the same during 1989 as in April 1990.

Median Income--The median divides the income distribution into two equal parts, one having incomes above the median and the other having incomes below the median. For households and families, the median income is based on the distribution of the total number of units including those with no income. The median for persons is based on persons with income. The median income values for all households, families, and persons are computed on the basis of more detailed income intervals than shown in most tabulations. Median household or family income figures of \$50,000 or less are calculated using linear interpolation. For persons, corresponding median values of \$40,000 or less are also computed using linear interpolation. All other median income amounts are derived through Pareto interpolation. (For more information on medians and interpolation, see the discussion under "Derived Measures.")

Mean Income--This is the amount obtained by dividing the total income of a particular statistical universe by the number of units in that universe. Thus, mean household income is obtained by dividing total household income by the total number of households. For the various types of income the

means are based on households having those types of income. "Per capita income" is the mean income computed for every man, woman, and child in a particular group. It is derived by dividing the total income of a particular group by the total population in that group.

Care should be exercised in using and interpreting mean income values for small subgroups of the population. Because the mean is influenced strongly by extreme values in the distribution, it is especially susceptible to the effects of sampling variability, misreporting, and processing errors. The median, which is not affected by extreme values, is, therefore, a better measure than the mean when the population base is small. The mean, nevertheless, is shown in some data products for most small subgroups because, when weighted according to the number of cases, the means can be added to obtained summary measures for areas and groups other than those shown in census tabulations.

Limitation of the Data--Since questionnaire entries for income frequently are based on memory and not on records, many persons tended to forget minor or irregular sources of income and, therefore, underreport their income. Underreporting tends to be more pronounced for income sources that are not derived from earnings, such as Social Security, public assistance, or from interest, dividends, and net rental income.

There are errors of reporting due to the misunderstanding of the income questions such as reporting gross rather than net dollar amounts for the two questions on net self-employment income, which resulted in an overstatement of these items. Another common error is the reporting of identical dollar amounts in two of the eight type of income items where a respondent with only one source of income assumed that the second amount should be entered to represent total income. Such instances of overreporting had an impact on the level of mean nonfarm or farm self-employment income and mean total income published for the various geographical subdivisions of the State.

Extensive computer editing procedures were instituted in the data processing operation to reduce some of these reporting errors and to improve the accuracy of the income data. These procedures corrected various reporting deficiencies and improved the consistency of reported income items associated with work experience and information on occupation and class of worker. For example, if persons reported they were self-employed on their own farm, not incorporated, but had reported wage and salary earnings only, the latter amount was shifted to net farm self-employment income. Also, if any respondent reported total income only, the amount was generally assigned to one of the type of income items according to responses to the work experience and class-of-worker questions. Another type of problem involved nonreporting of income data. Where income information was not reported, procedures were devised to impute appropriate values with either no income or positive or negative dollar amounts for the missing entries. (For more information on imputation, see Appendix C, Accuracy of the Data.)

In income tabulations for households and families, the lowest income group (e.g., less than \$5,000) includes units that were classified as having no 1989 income. Many of these were living on income "in

kind," savings, or gifts, were newly created families, or families in which the sole breadwinner had recently died or left the household. However, many of the households and families who reported no income probably had some money income which was not recorded in the census.

The income data presented in the tabulations covers money income only. The fact that many farm families receive an important part of their income in the form of "free" housing and goods produced and consumed on the farm rather than in money should be taken into consideration in comparing the income of farm and nonfarm residents. Nonmoney income such as business expense accounts, use of business transportation and facilities, or partial compensation by business for medical and educational expenses was also received by some nonfarm residents. Many low income families also receive income "in kind" from public welfare programs. In comparing income data for 1989 with earlier years, it should be noted that an increase or decrease in money income does not necessarily represent a comparable change in real income, unless adjustments for changes in prices are made.

Comparability--The income data collected in the 1980 and 1970 censuses are similar to the 1990 census data, but there are variations in the detail of the questions. In 1980, income information for 1979 was collected from persons in approximately 19 percent of all housing units and group quarters. Each person was required to report:

- Wage or salary income
- Net nonfarm self-employment income
- Net farm self-employment income
- Interest, dividend, or net rental or royalty income
- Social Security income
- Public assistance income
- Income from all other sources

Between the 1980 and 1990 censuses, there were minor differences in the processing of the data. In both censuses, all persons with missing values in one or more of the detailed type of income items and total income were designated as allocated. Each missing entry was imputed either as a "no" or as a dollar amount. If total income was reported and one or more of the type of income fields was not answered, then the entry in total income generally was assigned to one of the income types according to the socioeconomic characteristics of the income recipient. This person was designated as unallocated.

In 1980 and 1990, all nonrespondents with income not reported (whether heads of households or other persons) were assigned the reported income of persons with similar characteristics. (For more information on imputation, see Appendix C, "Accuracy of the Data.")

There was a difference in the method of computer derivation of aggregate income from individual amounts between the two census processing operations. In the 1980 census, income amounts less than \$100,000 were coded in tens of dollars, and amounts of \$100,000 or more were coded in thousands of dollars; \$5 was added to each amount coded

in tens of dollars and \$500 to each amount coded in thousands of dollars. Entries of \$999,000 or more were treated as \$999,500 and losses of \$9,999 or more were treated as minus \$9,999. In the 1990 census, income amounts less than \$999,999 were keyed in dollars. Amounts of \$999,999 or more were treated as \$999,999 and losses of \$9,999 or more were treated as minus \$9,999 in all of the computer derivations of aggregate income.

In 1970, information on income in 1969 was obtained from all members in every fifth housing unit and small group quarters (less than 15 persons) and every fifth person in all other group quarters. Each person was required to report:

- Wage or salary income
- Net nonfarm self-employment income
- Net farm self-employment income
- Social Security or Railroad Retirement
- Public assistance or welfare payments
- Income from all other sources

If a person reported a dollar amount in wage or salary, net nonfarm self-employment income, or net farm self-employment income, the person was considered as unallocated only if no further dollar amounts were imputed for any additional missing entries.

In 1960, data on income were obtained from all members in every fourth housing unit and from every fourth person 14 years old and over living in group quarters. Each person was required to report wage or salary income, net self-employment income, and income other than earnings received in 1959. An assumption was made in the editing process that no other type of income was received by a person who reported the receipt of either wage and salary income or self-employment but who had failed to report the receipt of other money income.

For several reasons, the income data shown in census tabulations are not directly comparable with those that may be obtained from statistical summaries of income tax returns. Income, as defined for Federal tax purposes, differs somewhat from the Census Bureau concept. Moreover, the coverage of income tax statistics is different because of the exemptions of persons having small amounts of income and the inclusion of net capital gains in tax returns. Furthermore, members of some families file separate returns and others file joint returns; consequently, the income reporting unit is not consistently either a family or a person.

The earnings data shown in census tabulations are not directly comparable with earnings records of the Social Security Administration. The earnings record data for 1989 excluded the earnings of most civilian government employees, some employees of nonprofit organizations, workers covered by the Railroad Retirement Act, and persons not covered by the program because of insufficient earnings. Furthermore, earnings received from any one employer in excess of \$48,000 in 1989 are not covered by earnings records. Finally, because census data are obtained from household questionnaires, they may differ

from Social Security Administration earnings record data, which are based upon employers' reports and the Federal income tax returns of self-employed persons.

The Bureau of Economic Analysis (BEA) of the Department of Commerce publishes annual data on aggregate and per-capita personal income received by the population for States, metropolitan areas, and selected counties. Aggregate income estimates based on the income statistics shown in census products usually would be less than those shown in the BEA income series for several reasons. The Census Bureau data are obtained directly from households, whereas the BEA income series is estimated largely on the basis of data from administrative records of business and governmental sources. Moreover, the definitions of income are different. The BEA income series includes some items not included in the income data shown in census publications, such as income "in kind," income received by nonprofit institutions, the value of services of banks and other financial intermediaries rendered to persons without the assessment of specific charges, Medicare payments, and the income of persons who died or emigrated prior to April 1, 1990. On the other hand, the census income data include contributions for support received from persons not residing in the same household and employer contributions for social insurance.

INDUSTRY, OCCUPATION, AND CLASS OF WORKER--The data on industry, occupation, and class of worker were derived from answers to questionnaire items 28, 29, and 30 respectively. These questions were asked of a sample of persons. Information on industry relates to the kind of business conducted by a person's employing organization; occupation describes the kind of work the person does on the job.

For employed persons, the data refer to the person's job during the reference week. For those who worked at two or more jobs, the data refer to the job at which the person worked the greatest number of hours. For unemployed persons, the data refer to their last job. The industry and occupation statistics are derived from the detailed classification systems developed for the 1990 census as described below. The Classified Index of Industries and Occupations provided additional information on the industry and occupation classification systems.

Respondents provided the data for the tabulations by writing on the questionnaires descriptions of their industry and occupation. These descriptions were keyed and passed through automated coding software which assigned a portion of the written entries to categories in the classification system. The automated system assigned codes to 59 percent of the industry entries and 38 percent of the occupation entries.

Those cases not coded by the computer were referred to clerical staff in the Census Bureau's Kansas City processing office for coding. The clerical staff converted the written questionnaire descriptions to codes by comparing these descriptions to entries in the Alphabetical Index of Industries and Occupations. For the industry code, these coders also referred to an Employer Name List

(formerly called Company Name List). This list, prepared from the Standard Statistical Establishment List developed by the Census Bureau for the economic censuses and surveys, contained the names of business establishments and their Standard Industrial Classification (SIC) codes converted to population census equivalents. This list facilitated coding and maintained industrial classification comparability.

Industry--The industry classification system developed for the 1990 census consists of 235 categories for employed persons, classified into 13 major industry groups. Since 1940, the industrial classification has been based on the Standard Industrial Classification Manual (SIC). The 1990 census classification was developed from the 1987 SIC published by the Office of Management and Budget Executive Office of the President.

The SIC was designed primarily to classify establishments by the type of industrial activity in which they were engaged. However, census data, which were collected from households, differ in detail and nature from those obtained from establishment surveys. Therefore, the census classification systems, while defined in SIC terms, cannot reflect the full detail in all categories. There are several levels of industrial classification found in census products. For example, the 1990 CP-2, Social and Economic Characteristics report includes 41 unique industrial categories, while the 1990 Summary Tape File 4 (STF 4) presents 72 categories.

Occupation--The occupational classification system developed for the 1990 census consists of 500 specific occupational categories for employed persons arranged into 6 summary and 13 major occupational groups. This classification was developed to be consistent with the Standard Occupational Classification (SOC) Manual: 1980, published by the Office of Federal Statistical Policy and Standards, U.S. Department of Commerce. Tabulations with occupation as the primary characteristic present several levels of occupational detail. The most detailed tabulations are shown in a special 1990 subject report and tape files on occupation. These products contain all 500 occupational categories plus industry or class of worker subgroupings of occupational categories.

Some occupation groups are related closely to certain industries. Operators of transportation equipment, farm operators and workers, and private household workers account for major portions of their respective industries of transportation, agriculture, and private households. However, the industry categories include persons in other occupations. For example, persons employed in agriculture include truck drivers and bookkeepers; persons employed in the transportation industry include mechanics, freight handlers, and payroll clerks; and persons employed in the private household industry include occupations such as chauffeur, gardener, and secretary.

Class of Worker--The data on class of worker were derived from answers to questionnaire item 30. The information on class of worker refers to the same job as a respondent's industry and occupation and categorizes persons according to the type of ownership of the employing organization. The class of worker categories are defined as follows:

Private Wage and Salary Workers--Includes persons who worked for wages, salary, commission, tips, pay-in-kind, or piece rates for a private for profit employer or a private not-for-profit, tax-exempt or charitable organization. Self-employed persons whose business was incorporated are included with private wage and salary workers because they are paid employees of their own companies. Some tabulations present data separately for these subcategories: "For profit," "Not for profit," and "Own business incorporated."

Employees of foreign governments, the United Nations, or other formal international organizations were classified as "Private-not-for-profit."

Government Workers--Includes persons who were employees of any local, State, or Federal governmental unit, regardless of the activity of the particular agency. For some tabulations, the data were presented separately for the three levels of government.

Self-Employed Workers--Includes persons who worked for profit or fees in their own unincorporated business, profession, or trade, or who operated a farm.

Unpaid Family Workers--Includes persons who worked 15 hours or more without pay in a business or on a farm operated by a relative.

Salaried/Self-Employed--In tabulations that categorize persons as either salaried or self-employed, the salaried category includes private and government wage and salary workers; self-employed includes self-employed persons and unpaid family workers.

The industry category, "Public administration," is limited to regular government functions such as legislative, judicial, administrative, and regulatory activities of governments. Other government organizations such as schools, hospitals, liquor stores, and bus lines are classified by industry according to the activity in which they are engaged. On the other hand, the class of worker government categories include all government workers.

Occasionally respondents supplied industry, occupation, or class of worker descriptions which were not sufficiently specific for precise classification or did not report on these items at all. Some of these cases were corrected through the field editing process and during the coding and tabulation operations. In the coding operation, certain types of incomplete entries were corrected using the Alphabetical Index of Industries and Occupations. For example, it was possible in certain situations to assign an industry code based on the occupation reported.

Following the coding operations, there was a computer edit and an allocation process. The edit first determined whether a respondent was in the universe which required an industry and occupation code. The codes for the three items (industry, occupation, and class of worker) were checked to ensure they were valid and were edited for their relation to each other. Invalid and inconsistent codes were either

blanked or changed to a consistent code.

If one or more of the three codes were blank after the edit, a code was assigned from a "similar" person based on other items such as age, sex, education, farm or nonfarm residence, and weeks worked. If all the labor force and income data also were blank, all these economic items were assigned from one other person who provided all the necessary data.

Comparability--Comparability of industry and occupation data was affected by a number of factors, primarily the systems used to classify the questionnaire responses. For both the industry and occupation classification systems, the basic structures were generally the same from 1940 to 1970, but changes in the individual categories limited comparability of the data from one census to another. These changes were needed to recognize the "birth" of new industries and occupations, the "death" of others, and the growth and decline in existing industries and occupations, as well as, the desire of analysts and other users for more detail in the presentation of the data. Probably the greatest cause of incomparability is the movement of a segment of a category to a different category in the next census. Changes in the nature of jobs and respondent terminology, and refinement of category composition made these movements necessary.

In the 1990 census, the industry classification had minor revisions to reflect recent changes to the SIC. The 1990 occupational classification system is essentially the same as that for the 1980 census. However, the conversion of the census classification to the SOC in 1980 meant that the 1990 classification system was less comparable to the classifications used prior to the 1980 census.

Other factors that affected data comparability included the universe to which the data referred (in 1970, the age cutoff for labor force was changed from 14 years to 16 years); how the industry and occupation questions were worded on the questionnaire (for example, important changes were made in 1970); improvements in the coding procedures (the Employer Name List technique was introduced in 1960); and how the "not reported" cases are handled. Prior to 1970, they were placed in the residual categories, "Industry not reported" and "Occupation not reported." In 1970, an allocation process was introduced that assigned these cases to major groups. In 1990, as in 1980, the "Not reported" cases were assigned to individual categories. Therefore, the 1980 and 1990 data for individual categories included some numbers of persons who were tabulated in a "Not reported" category in previous censuses.

The following publications contain information on the various factors affecting comparability and are particularly useful for understanding differences in the occupation and industry information from earlier censuses: U.S. Bureau of the Census, *Changes Between the 1950 and 1960 Occupation and Industry Classifications With Detailed Adjustments of 1950 Data to the 1960 Classifications*, Technical Paper No. 18, 1968; U.S. Bureau of the Census, *1970 Occupation and Industry Classification Systems in Terms of their 1960 Occupation and Industry*

Elements, Technical Paper No. 26, 1972; and U.S. Bureau of the Census, The Relationship Between the 1970 and 1980 Industry and Occupation Classification Systems, Technical Paper No. 59, 1988. For citations for earlier census years, see the 1980 Census of Population report, PC80-1-D, Detailed Population Characteristics.

The 1990 census introduced an additional class of worker category for "private not-for-profit" employers. This category is a subset of the 1980 category "employee of private employer" so there is no comparable data before 1990. Also in 1990, employees of foreign governments, the United Nations, etc., are classified as "private not-for-profit," rather than Federal Government as in 1970 and 1980. While in theory, there was a change in comparability, in practice, the small number of U.S. residents working for foreign governments made this change negligible.

Comparability between the statistics on industry and occupation from the 1990 census and statistics from other sources is affected by many of the factors described in the section on "Employment Status." These factors are primarily geographic differences between residence and place of work, different dates of reference, and differences in counts because of dual job holding. Industry data from population censuses cover all industries and all kinds of workers, whereas, data from establishments often excluded private household workers, government workers, and the self-employed. Also, the replies from household respondents may have differed in detail and nature from those obtained from establishments.

Occupation data from the census and data from government licensing agencies, professional associations, trade unions, etc., may not be as comparable as expected. Organizational listings often include persons not in the labor force or persons devoting all or most of their time to another occupation; or the same person may be included in two or more different listings. In addition, relatively few organizations, except for those requiring licensing, attained complete coverage of membership in a particular occupational field.

JOURNEY TO WORK

Place of Work--The data on place of work were derived from answers to questionnaire item 22, which was asked of persons who indicated in question 21 that they worked at some time during the reference week. (For more information, see discussion under "Reference Week.")

Data were tabulated for workers 16 years and over; that is, members of the Armed Forces and civilians who were at work during the reference week. Data on place of work refer to the geographic location at which workers carried out their occupational activities during the reference week. The exact address (number and street) of the place of work was asked, as well as the place (city, town, or post office); whether or not the place of work was inside or outside the limits of that city or town; and the county, State, and ZIP Code. If the person's employer operated in more than one location, the exact address of the location

or branch where the respondent worked was requested. When the number and street name were unknown, a description of the location, such as the building name or nearest street or intersection, was to be entered.

Persons who worked at more than one location during the reference week were asked to report the one at which they worked the greatest number of hours. Persons who regularly worked in several locations each day during the reference week were requested to give the address at which they began work each day. For cases in which daily work did not begin at a central place each day, the person was asked to provide as much information as possible to describe the area in which he or she worked most during the reference week.

In some tabulations, place-of-work locations may be defined as "in area of residence" and "outside area of residence." The area of residence may vary from table to table or even within a table, and refers to the particular area or areas shown. For example, in a table that provides data for counties, "in area of residence" refers to persons who worked in the same county in which they lived, while "outside area of residence" refers to persons whose workplace was located in a county different from the one in which they lived. Similarly, in a table that provides data for several types of areas, such as the State and its individual metropolitan areas (MA's), counties, and places, the place-of-work data will be variable and is determined by the geographic level (State, MA, county, or place) shown in each section of the tabulation.

In tabulations that present data for States, workplaces for the residents of the State may include, in addition to the State itself, each contiguous State. The category, "in noncontiguous State or abroad," includes persons who worked in a State that did not border their State of residence as well as persons who worked outside the United States.

In tabulations that present data for an MSA/PMSA, place-of-work locations are specified to show the main destinations of workers living in the MSA/PMSA. (For more information on metropolitan areas (MA's), see Appendix A, Area Classifications.) All place-of-work locations are identified with respect to the boundaries of the MSA/PMSA as "inside MSA/PMSA" or "outside MSA/PMSA." Locations within the MSA/PMSA are further divided into each central city, and each county or county balance. Selected large incorporated places also may be specified as places of work.

Within New England MSA/PMSA's, the places of work presented generally are cities and towns. Locations outside the MSA/PMSA are specified if they are important commuting destinations for residents of the MSA/PMSA, and may include adjoining MSA/PMSA's and their central cities, their component counties, large incorporated places, or counties, cities, or other geographic areas outside any MA. In tabulations for MSA/PMSA's in New England; Honolulu, Hawaii; and certain other MA's, some place-of-work locations are identified as "areas" (e.g., Area 1, Area 5, Area 12, etc.). Such areas consist of groups of

towns, cities, census designated places (Honolulu MSA only), or counties that have been identified as unique place-of-work destinations. When an adjoining MSA/PMSA or MSA/PMSA remainder is specified as a place-of-work location, its components are not defined. However, the components are presented in the 1990 CP-1, General Population Characteristics for Metropolitan Areas and the 1990 CH-1, General Housing Characteristics for Metropolitan Areas reports. In tabulations that present data for census tracts outside MA's, place-of-work locations are defined as "in county of residence" and "outside county of residence."

In areas where the workplace address was coded to the block level, persons were tabulated as working inside or outside a specific place based on the location of that address, regardless of the response to question 22c concerning city/town limits. In areas where it was impossible to code the workplace address to the block level, persons were tabulated as working in a place if a place name was reported in question 22b and the response to question 22c was either "Yes" or the item was left blank. In selected areas, census designated places (CDP's) may appear in the tabulations as places of work. The accuracy of place-of-work data for CDP's may be affected by the extent to which their census names were familiar to respondents, and by coding problems caused by similarities between the CDP name and the names of other geographic jurisdictions in the same vicinity.

Place-of-work data are given for selected minor civil divisions (generally, cities, towns, and townships) in the nine Northeastern States, based on the responses to the place-of-work question. Many towns and townships are regarded locally as equivalent to a place and therefore, were reported as the place of work. When a respondent reported a locality or incorporated place that formed a part of a township or town, the coding and tabulating procedure was designed to include the response in the total for the township or town. The accuracy of the place-of-work data for minor civil divisions is greatest for the New England States. However, the data for some New England towns, for towns in New York, and for townships in New Jersey and Pennsylvania may be affected by coding problems that resulted from the unfamiliarity of the respondent with the minor civil division in which the workplace was located or when a township and a city or borough of the same or similar name are located close together.

Place-of-work data may show a few workers who made unlikely daily work trips (e.g., workers who lived in New York and worked in California). This result is attributable to persons who worked during the reference week at a location that was different from their usual place of work, such as persons away from home on business.

Comparability--The wording of the question on place of work was substantially the same in the 1990 census as it was in 1980. However, data on place of work from the 1990 census are based on the full census sample, while data from the 1980 census were based on only about one-half of the full sample.

For the 1980 census, nonresponse or incomplete responses to the

place-of-work question were not allocated, resulting in the use of "not reported" categories in the 1980 publications. However, for the 1990 census, when place of work was not reported or the response was incomplete, a work location was allocated to the person based on their means of transportation to work, travel time to work, industry, and location of residence and workplace of others. The 1990 publications, therefore, do not contain a "not reported" category for the place-of-work data.

Comparisons between 1980 and 1990 census data on the gross number of workers in particular commuting flows, or the total number of persons working in an area, should be made with extreme caution. Any apparent increase in the magnitude of the gross numbers may be due solely to the fact that for 1990 the "not reported" cases have been distributed among specific place-of-work destinations, instead of tallied in a separate category as in 1980.

Limitation of the Data--The data on place of work relate to a reference week; that is, the calendar week preceding the date on which the respondents completed their questionnaires or were interviewed by enumerators. This week is not the same for all respondents because the enumeration was not completed in 1 week. However, for the majority of persons, the reference week for the 1990 census is the last week in March 1990. The lack of a uniform reference week means that the place-of-work data reported in the census will not exactly match the distribution of workplace locations observed or measured during an actual workweek.

The place-of-work data are estimates of persons 16 years old and over who were both employed and at work during the reference week (including persons in the Armed Forces). Persons who did not work during the reference week but had jobs or businesses from which they were temporarily absent due to illness, bad weather, industrial dispute, vacation, or other personal reasons are not included in the place-of-work data. Therefore, the data on place of work understate the total number of jobs or total employment in a geographic area during the reference week. It also should be noted that persons who had irregular, casual, or unstructured jobs during the reference week may have erroneously reported themselves as not working.

The address where the individual worked most often during the reference week was recorded on the census questionnaire. If a worker held two jobs, only data about the primary job (the one worked the greatest number of hours during the preceding week) was requested. Persons who regularly worked in several locations during the reference week were requested to give the address at which they began work each day. For cases in which daily work was not begun at a central place each day, the person was asked to provide as much information as possible to describe the area in which he or she worked most during the reference week.

Means of Transportation to Work--The data on means of transportation to work were derived from answers to questionnaire item 23a, which was asked of persons who indicated in question 21 that they worked at some time

during the reference week. (For more information, see discussion under "Reference Week.") Means of transportation to work refers to the principal mode of travel or type of conveyance that the person usually used to get from home to work during the reference week.

Persons who used different means of transportation on different days of the week were asked to specify the one they used most often, that is, the greatest number of days. Persons who used more than one means of transportation to get to work each day were asked to report the one used for the longest distance during the work trip. The category, "Car, truck, or van," includes workers using a car (including company cars but excluding taxicabs), a truck of one-ton capacity or less, or a van. The category, "Public transportation," includes workers who used a bus or trolley bus, streetcar or trolley car, subway or elevated, railroad, ferryboat, or taxicab even if each mode is not shown separately in the tabulation. The category, "Other means," includes workers who used a mode of travel which is not identified separately within the data distribution. The category, "Other means," may vary from table to table, depending on the amount of detail shown in a particular distribution.

The means of transportation data for some areas may show workers using modes of public transportation that are not available in those areas (e.g., subway or elevated riders in an MA where there actually is no subway or elevated service). This result is largely due to persons who worked during the reference week at a location that was different from their usual place of work (such as persons away from home on business in an area where subway service was available) and persons who used more than one means of transportation each day but whose principal means was unavailable where they lived (for example, residents of nonmetropolitan areas who drove to the fringe of an MA and took the commuter railroad most of the distance to work).

Private Vehicle Occupancy--The data on private vehicle occupancy were derived from answers to questionnaire item 23b. This question was asked of persons who indicated in question 21 that they worked at some time during the reference week and who reported in question 23a that their means of transportation to work was "Car, truck, or van." (For more information, see discussion under "Reference Week.")

Private vehicle occupancy refers to the number of persons who usually rode to work in the vehicle during the reference week. The category, "Drove alone," includes persons who usually drove alone to work as well as persons who were driven to work by someone who then drove back home or to a nonwork destination. The category, "Carpooled," includes workers who reported that two or more persons usually rode to work in the vehicle during the reference week.

Persons Per Car, Truck, or Van--This is obtained by dividing the number of persons who reported using a car, truck, or van to get to work by the number of such vehicles that they used. The number of vehicles used is derived by counting each person who drove alone as one vehicle, each person who reported being in a two-person carpool as one-half vehicle, each person who reported being in a three-person carpool as one-third vehicle, and so

on, and then summing all the vehicles.

Time Leaving Home to Go to Work--The data on time leaving home to go to work were derived from answers to questionnaire item 24a. This question was asked of persons who indicated in question 21 that they worked at some time during the reference week and who reported in question 23a that they worked outside their home. The departure time refers to the time of day that the person usually left home to go to work during the reference week. (For more information, see discussion under "Reference Week.")

Travel Time to Work--The data on travel time to work were derived from answers to questionnaire item 24b. This question was asked of persons who indicated in question 21 that they worked at some time during the reference week and who reported in question 23a that they worked outside their home. Travel time to work refers to the total number of minutes that it usually took the person to get from home to work during the reference week. The elapsed time includes time spent waiting for public transportation, picking up passengers in carpools, and time spent in other activities related to getting to work. (For more information, see discussion under "Reference Week.")

LANGUAGE SPOKEN AT HOME AND ABILITY TO SPEAK ENGLISH

Language Spoken at Home--Data on language spoken at home were derived from the answers to questionnaire items 15a and 15b, which were asked of a sample of persons born before April 1, 1985. Instructions mailed with the 1990 census questionnaire stated that a respondent should mark "Yes" in question 15a if the person sometimes or always spoke a language other than English at home and should not mark "Yes" if a language was spoken only at school or if speaking was limited to a few expressions or slang. For question 15b, respondents were instructed to print the name of the non-English language spoken at home. If the person spoke more than one language other than English, the person was to report the language spoken more often or the language learned first.

The cover of the census questionnaire included information in Spanish which provided a telephone number for respondents to call to request a census questionnaire and instructions in Spanish. Instruction guides were also available in 32 other languages to assist enumerators who encountered households or respondents who spoke no English.

Questions 15a and 15b referred to languages spoken at home in an effort to measure the current use of languages other than English. Persons who knew languages other than English but did not use them at home or who only used them elsewhere were excluded. Persons who reported speaking a language other than English at home may also speak English; however, the questions did not permit determination of the main or dominant language of persons who spoke both English and another language. (For more information, see discussion below on "Ability to Speak English.")

For persons who indicated that they spoke a language other than English at home in question 15a, but failed to specify the name of the language in question 15b, the language was assigned based on the language of

other speakers in the household; on the language of a person of the same Spanish origin or detailed race group living in the same or a nearby area; or on a person of the same ancestry or place of birth. In all cases where a person was assigned a non-English language, it was assumed that the language was spoken at home. Persons for whom the name of a language other than English was entered in question 15b, and for whom question 15a was blank were assumed to speak that language at home.

The write-in responses listed in question 15b (specific language spoken) were transcribed onto computer files and coded into more than 380 detailed language categories using an automated coding system. The automated procedure compared write-in responses reported by respondents with entries in a computer dictionary, which initially contained approximately 2,000 language names. The dictionary was updated with a large number of new names, variations in spelling, and a small number of residual categories. Each write-in response was given a numeric code that was associated with one of the detailed categories in the dictionary. If the respondent listed more than one non-English language, only the first was coded.

The write-in responses represented the names people used for languages they speak. They may not match the names or categories used by linguists. The sets of categories used are sometimes geographic and sometimes linguistic. Figure 1 provides an illustration of the content of the classification schemes used to present language data. For more information, write to the Chief, Population Division, U.S. Bureau of the Census, Washington, DC 20233.

Household Language--In households where one or more persons (age 5 years old or over) speak a language other than English, the household language assigned to all household members is the non-English language spoken by the first person with a non-English language in the following order:

householder, spouse, parent, sibling,
child, grandchild, other relative, stepchild, unmarried partner,
housemate or roommate, roomer, boarder, or foster child, or other
nonrelative. Thus, persons who speak only English may have a
non-English household language assigned to them in tabulations of
persons by household language.

Figure 1. Four- and Twenty-Five-Group Classifications of 1990 Census Languages Spoken at Home with Illustrative Examples

Four-Group Classification	Twenty-Five-Group Classification	Examples
Spanish	Spanish	Spanish, Ladino
Other Indo-European	French	French, Cajun, French Creole
	Italian	
	Portuguese	
	German	
	Yiddish	
	Other West Germanic	Afrikaans, Dutch, Pennsylvania Dutch
	Scandinavian	Danish, Norwegian,

	Swedish
Polish	
Russian	
South Slavic	Serbocroatian, Bulgarian, Macedonian, Slovene
Other Slavic	Czech, Slovak, Ukranian
Greek	
Indic	Hindi, Bengali, Gujarathi, Punjabi, Romany, Sinhalese
Other Indo-European, not elsewhere classified	Armenian, Gaelic, Lithuanian, Persian
Languages of Asia and the Pacific	Chinese Japanese Mon-Khmer Tagalog Korean Vietnamese Other languages (part)
	Cambodian Chamorro, Dravidian Languages, Hawaiian, Ilocano, Thai, Turkish
All other lan- guages	Arabic Hungarian Native North American languages Other languages (part)
	Amharic, Syriac, Finnish, Hebrew, Languages of Central and South America, Other Languages of Africa

Ability to Speak English--Persons 5 years old and over who reported that they spoke a language other than English in question 15a were also asked in question 15c to indicate their ability to speak English based on one of the following categories: "Very well," "Well," "Not well," or "Not at all."

The data on ability to speak English represent the person's own perception about his or her own ability or, because census questionnaires are usually completed by one household member, the responses may represent the perception of another household member. The instruction guides and questionnaires that were mailed to households did not include any information on how to interpret the response categories in question 15c.

Persons who reported that they spoke a language other than English at home but whose ability to speak English was not reported, were assigned the English-language ability of a randomly selected person of the same age, Spanish origin, nativity and year of entry, and language group.

Linguistic Isolation-- A household in which no person age 14 years or over speaks only English and no person age 14 years or over who speaks a language other than English speaks English "Very well" is classified as "linguistically isolated." All the members of a linguistically isolated household are tabulated as linguistically isolated, including members under age 14 years who may speak only English.

Limitation of the Data--Persons who speak a language other than English at home may have first learned that language at school. However, these persons

would be expected to indicate that they spoke English "Very well." Persons who speak a language other than English, but do not do so at home, should have been reported as not speaking a language other than English at home.

The extreme detail in which language names were coded may give a false impression of the linguistic precision of these data. The names used by speakers of a language to identify it may reflect ethnic, geographic, or political affiliations and do not necessarily respect linguistic distinctions. The categories shown in the tabulations were chosen on a number of criteria, such as information about the number of speakers of each language that might be expected in a sample of the United States population.

Comparability--Information on language has been collected in every census since 1890. The comparability of data among censuses is limited by changes in question wording, by the subpopulations to whom the question was addressed, and by the detail that was published.

The same question on language was asked in the 1980 and 1990 censuses. This question on the current language spoken at home replaced the questions asked in prior censuses on mother tongue; that is, the language other than English spoken in the person's home when he or she was a child; one's first language; or the language spoken before immigrating to the United States. The censuses of 1910-1940, 1960 and 1970 included questions on mother tongue. A change in coding procedure from 1980 to 1990 should have improved accuracy of coding and may affect the number of persons reported in some of the 380 plus categories. It should not greatly affect the 4-group or 25- group lists. In 1980, coding clerks supplied numeric codes for the written entries on each questionnaire using a 2,000 name reference list. In 1990 written entries were transcribed to a computer file and matched to a computer dictionary which began with the 2,000 name list, but expanded as unmatched names were referred to headquarters specialists for resolution.

The question on ability to speak English was asked for the first time in 1980. In tabulations from 1980, the categories "Very well" and "Well" were combined. Data from other surveys suggested a major difference between the category "Very well" and the remaining categories. In tabulations showing ability to speak English, persons who reported that they spoke English "Very well" are presented separately from persons who reported their ability to speak English as less than "Very well."

MARITAL STATUS--The data on marital status were derived from answers to questionnaire item 6, which was asked of all persons. The marital status classification refers to the status at the time of enumeration. Data on marital status are tabulated only for persons 15 years old and over.

All persons were asked whether they were "now married," "widowed," "divorced," "separated," or "never married." Couples who live together (unmarried persons, persons in common-law marriages) were allowed to report the marital status they considered the most appropriate.

Never Married--Includes all persons who have never been married, including persons whose only marriage(s) was annulled.

Ever Married--Includes persons married at the time of enumeration (including those separated), widowed, or divorced.

Now Married, Except Separated--Includes persons whose current marriage has not ended through widowhood, divorce, or separation (regardless of previous marital history). The category may also include couples who live together or persons in common-law marriages if they consider this category the most appropriate. In certain tabulations, currently married persons are further classified as "spouse present" or "spouse absent."

Separated--Includes persons legally separated or otherwise absent from their spouse because of marital discord. Included are persons who have been deserted or who have parted because they no longer want to live together but who have not obtained a divorce.

Widowed--Includes widows and widowers who have not remarried.

Divorced--Includes persons who are legally divorced and who have not remarried.

In selected sample tabulations, data for married and separated persons are reorganized and combined with information on the presence of the spouse in the same household.

Now Married--All persons whose current marriage has not ended by widowhood or divorce. This category includes persons defined above as "separated."

Spouse Present--Married persons whose wife or husband was enumerated as a member of the same household, including those whose spouse may have been temporarily absent for such reasons as travel or hospitalization.

Spouse Absent--Married persons whose wife or husband was not enumerated as a member of the same household. This category also includes all married persons living in group quarters.

Separated--Defined above.

Spouse Absent, Other--Married persons whose wife or husband was not enumerated as a member of the same household, excluding separated. Included is any person whose spouse was employed and living away from home or in an institution or absent in the Armed Forces.

Differences between the number of currently married males and the number of currently married females occur because of reporting differences and because some husbands and wives have their usual residence in different areas. In sample tabulations, these differences can also occur because different weights are applied to the individual's data. Any differences between the number of "now married, spouse present" males and females are due solely to sample weighting. By definition, the numbers would be the same.

When marital status was not reported, it was imputed according to the relationship to the householder and sex and age of the person. (For more information on imputation, see Appendix C, Accuracy of the Data.)

Comparability--The 1990 marital status definitions are the same as those used in 1980 with the exception of the term "never married" which replaces the term "single" in tabulations. A general marital status question has been asked in every census since 1880.

MOBILITY LIMITATION STATUS--The data on mobility limitation status were derived from answers to questionnaire item 19a, which was asked of a sample of persons 15 years old and over. Persons were identified as having a mobility limitation if they had a health condition that had lasted for 6 or more months and which made it difficult to go outside the home alone. Examples of outside activities on the questionnaire included shopping and visiting the doctor's office.

The term "health condition" referred to both physical and mental conditions. A temporary health problem, such as a broken bone that was expected to heal normally, was not considered a health condition.

Comparability--This was the first time that a question on mobility limitation was included in the census.

PLACE OF BIRTH--The data on place of birth were derived from answers to questionnaire item 8, which was asked on a sample basis. The place-of-birth question asked respondents to report the U.S. State, commonwealth or territory, or the foreign country where they were born. Persons born outside the United States were asked to report their place of birth according to current international boundaries. Since numerous changes in boundaries of foreign countries have occurred in the last century, some persons may have reported their place of birth in terms of boundaries that existed at the time of their birth or emigration, or in accordance with their own national preference.

Persons not reporting place of birth were assigned the birthplace of another family member or were allocated the response of another person with similar characteristics. Persons allocated as foreign born were not assigned a specific country of birth but were classified as "Born abroad, country not specified."

Nativity--Information on place of birth and citizenship were used to classify the population into two major categories: native and foreign born. When information on place of birth was not reported, nativity was assigned on the basis of answers to citizenship, if reported, and other characteristics.

Native--Includes persons born in the United States, Puerto Rico, or an outlying area of the United States. The small number of persons who were born in a foreign country but have at least one American parent also are included in this category.

The native population is classified in the following groups: persons

born in the State in which they resided at the time of the census; persons born in a different State, by region; persons born in Puerto Rico or an outlying area of the U.S.; and persons born abroad with at least one American parent.

Foreign Born--Includes persons not classified as "Native." Prior to the 1970 census, persons not reporting place of birth were generally classified as native.

The foreign-born population is shown by selected area, country, or region of birth: the places of birth shown in data products were selected based on the number of respondents who reported that area or country of birth.

Comparability--Data on the State of birth of the native population have been collected in each census beginning with that of 1850. Similar data were shown in tabulations for the 1980 census and other recent censuses. Nonresponse was allocated in a similar manner in 1980; however, prior to 1980, nonresponse to the place of birth question was not allocated. Prior to the 1970 census, persons not reporting place of birth were generally classified as native.

The questionnaire instruction to report mother's State of residence instead of the person's actual State of birth (if born in a hospital in a different State) was dropped in 1990. Evaluation studies of 1970 and 1980 census data demonstrated that this instruction was generally either ignored or misunderstood. Since the hospital and the mother's residence is in the same State for most births, this change may have a slight effect on State of birth data for States with large metropolitan areas that straddle State lines.

POVERTY STATUS IN 1989--The data on poverty status were derived from answers to the same questions as the income data, questionnaire items 32 and 33. (For more information, see the discussion under "Income in 1989.") Poverty statistics presented in census publications were based on a definition originated by the Social Security Administration in 1964 and subsequently modified by Federal interagency committees in 1969 and 1980 and prescribed by the Office of Management and Budget in Directive 14 as the standard to be used by Federal agencies for statistical purposes.

At the core of this definition was the 1961 economy food plan, the least costly of four nutritionally adequate food plans designed by the Department of Agriculture. It was determined from the Agriculture Department's 1955 survey of food consumption that families of three or more persons spend approximately one-third of their income on food; hence, the poverty level for these families was set at three times the cost of the economy food plan. For smaller families and persons living alone, the cost of the economy food plan was multiplied by factors that were slightly higher to compensate for the relatively larger fixed expenses for these smaller households.

The income cutoffs used by the Census Bureau to determine the poverty status of families and unrelated individuals included a set of 48

thresholds arranged in a two-dimensional matrix consisting of family size (from one person to nine or more persons) cross-classified by presence and number of family members under 18 years old (from no children present to eight or more children present). Unrelated individuals and two-person families were further differentiated by age of the householder (under 65 years old and 65 years old and over).

The total income of each family or unrelated individual in the sample was tested against the appropriate poverty threshold to determine the poverty status of that family or unrelated individual. If the total income was less than the corresponding cutoff, the family or unrelated individual was classified as "below the poverty level." The number of persons below the poverty level was the sum of the number of persons in families with incomes below the poverty level and the number of unrelated individuals with incomes below the poverty level.

The poverty thresholds are revised annually to allow for changes in the cost of living as reflected in the Consumer Price Index. The average poverty threshold for a family of four persons was \$12,674 in 1989. (For more information, see table A below.) Poverty thresholds were applied on a national basis and were not adjusted for regional, State or local variations in the cost of living. For a detailed discussion of the poverty definition, see U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 171, Poverty in the United States: 1988 and 1989.

Table A. Poverty Thresholds in 1989 by Size of Family and Number of Related Children Under 18 Years

Size of Family Unit	Weight average thresholds	Related children under 18 years								
		None	One	Two	Three	Four	Five	Six	Seven or more	
<hr/>										
One person (unrelated individual)	\$6,310									
Under 65 yrs.	6,451	\$6,451								
65 yrs. & over	5,947	5,947								
Two persons	8,076									
Householder under 65 yrs.	8,343	8,303	\$8,547							
Householder 65 yrs. & over	7,501	7,495	8,515							
Three persons	9,885	9,699	9,981	\$9,990						
Four persons	12,674	12,790	12,999	12,575	\$12,619					
Five persons	14,990	15,424	15,648	15,169	14,798	\$14,572				
Six persons	16,921	17,740	17,811	17,444	17,092	16,569	\$16,259			
Seven persons	19,162	20,412	20,540	20,101	19,794	19,224	18,558	\$17,828		
Eight persons	21,328	22,830	23,031	22,617	22,253	21,738	21,084	20,403	\$20,230	
Nine or more persons	25,480	27,463	27,596	27,229	26,921	26,415	25,719	25,089	24,933	\$23,973

Persons for Whom Poverty Status is Determined-- Poverty status was determined for all persons except institutionalized persons, persons in military group quarters and in college dormitories, and unrelated individuals under 15 years old. These groups also were excluded from the

denominator when calculating poverty rates.

Specified Poverty Levels--Since the poverty levels currently in use by the Federal Government do not meet all the needs of data users, some of the data are presented for alternate levels. These specified poverty levels are obtained by multiplying the income cutoffs at the poverty level by the appropriate factor. For example, the average income cutoff at 125 percent of poverty level was \$15,843 ($\$12,674 \times 1.25$) in 1989 for a family of four persons.

Weighted Average Thresholds at the Poverty Level--The average thresholds shown in the first column of table A are weighted by the presence and number of children. For example, the weighted average threshold for a given family size is obtained by multiplying the threshold for each presence and number of children category within the given family size by the number of families in that category. These products are then aggregated across the entire range of presence and number of children categories, and the aggregate is divided by the total number of families in the group to yield the weighted average threshold at the poverty level for that family size.

Since the basic thresholds used to determine the poverty status of families and unrelated individuals are applied to all families and unrelated individuals, the weighted average poverty thresholds are derived using all families and unrelated individuals rather than just those classified as being below the poverty level. To obtain the weighted poverty thresholds for families and unrelated individuals below alternate poverty levels, the weighted thresholds shown in table A may be multiplied directly by the appropriate factor. The weighted average thresholds presented in the table are based on the March 1990 Current Population Survey. However, these thresholds would not differ significantly from those based on the 1990 census.

Income Deficit--Represents the difference between the total income of families and unrelated individuals below the poverty level and their respective poverty thresholds. In computing the income deficit, families reporting a net income loss are assigned zero dollars and for such cases the deficit is equal to the poverty threshold.

This measure provided an estimate of the amount which would be required to raise the incomes of all poor families and unrelated individuals to their respective poverty thresholds. The income deficit is thus a measure of the degree of impoverishment of a family or unrelated individual. However, caution must be used in comparing the average deficits of families with different characteristics. Apparent differences in average income deficits may, to some extent, be a function of differences in family size.

Mean Income Deficit--Represents the amount obtained by dividing the total income deficit of a group below the poverty level by the number of families (or unrelated individuals) in that group.

Comparability--The poverty definition used in the 1990 and 1980 censuses differed slightly from the one used in the 1970 census. Three technical modifications were made to the definition used in the 1970 census as

described below:

1. The separate thresholds for families with a female householder with no husband present and all other families were eliminated. For the 1980 and 1990 censuses, the weighted average of the poverty thresholds for these two types of families was applied to all types of families, regardless of the sex of the householder.
2. Farm families and farm unrelated individuals no longer had a set of poverty thresholds that were lower than the thresholds applied to nonfarm families and unrelated individuals. The farm thresholds were 85 percent of the corresponding levels for nonfarm families in the 1970 census. The same thresholds were applied to all families and unrelated individuals regardless of residence in 1980 and 1990.
3. The thresholds by size of family were extended from seven or more persons in 1970 to nine or more persons in 1980 and 1990.

These changes resulted in a minimal increase in the number of poor at the national level. For a complete discussion of these modifications and their impact, see the Current Population Reports, Series P-60, No. 133.

The population covered in the poverty statistics derived from the 1980 and 1990 censuses was essentially the same as in the 1970 census. The only difference was that in 1980 and 1990, unrelated individuals under 15 years old were excluded from the poverty universe, while in 1970, only those under 14 years old were excluded. The poverty data from the 1960 census excluded all persons in group quarters and included all unrelated individuals regardless of age. It was unlikely that these differences in population coverage would have had significant impact when comparing the poverty data for persons since the 1960 censuses.

Current Population Survey--Because of differences in the questionnaires and data collection procedures, estimates of the number of persons below the poverty level by various characteristics from the 1990 census may differ from those reported in the March 1990 Current Population Survey.

RACE--The data on race were derived from answers to questionnaire item 4, which was asked of all persons. The concept of race as used by the Census Bureau reflects self-identification; it does not denote any clear-cut scientific definition of biological stock. The data for race represent self-classification by people according to the race with which they most closely identify. Furthermore, it is recognized that the categories of the race item include both racial and national origin or socio-cultural groups.

During direct interviews conducted by enumerators, if a person could not provide a single response to the race question, he or she was asked to select, based on self-identification, the group which best described his or her racial identity. If a person could not provide a single race response, the race of the mother was used. If a single race response could not be provided for the person's mother, the first race reported by the person was used. In all cases where occupied housing units,

households, or families are classified by race, the race of the householder was used.

The racial classification used by the Census Bureau generally adheres to the guidelines in Federal Statistical Directive No. 15, issued by the Office of Management and Budget, which provides standards on ethnic and racial categories for statistical reporting to be used by all Federal agencies. The racial categories used in the 1990 census data products are provided below.

White--Includes persons who indicated their race as "White" or reported entries such as Canadian, German, Italian, Lebanese, Near Easterner, Arab, or Polish.

Black--Includes persons who indicated their race as "Black or Negro" or reported entries such as African American, Afro-American, Black Puerto Rican, Jamaican, Nigerian, West Indian, or Haitian.

American Indian, Eskimo, or Aleut--Includes persons who classified themselves as such in one of the specific race categories identified below.

American Indian--Includes persons who indicated their race as "American Indian," entered the name of an Indian tribe, or reported such entries as Canadian Indian, French-American Indian, or Spanish-American Indian.

American Indian Tribe--Persons who identified themselves as American Indian were asked to report their enrolled or principal tribe. Therefore, tribal data in tabulations reflect the written tribal entries reported on the questionnaires. Some of the entries (for example, Iroquois, Sioux, Colorado River, and Flathead) represent nations or reservations.

The information on tribe is based on self-identification and therefore does not reflect any designation of Federally- or State-recognized tribe. Information on American Indian tribes is presented in summary tape files and special data products. The information is derived from the American Indian Detailed Tribal Classification List for the 1990 census. The classification list represents all tribes, bands, and clans that had a specified number of American Indians reported on the census questionnaire.

Eskimo--Includes persons who indicated their race as "Eskimo" or reported entries such as Arctic Slope, Inupiat, and Yupik.

Aleut--Includes persons who indicated their race as "Aleut" or reported entries such as Alutiiq, Egegik, and Pribilovian.

Asian or Pacific Islander--Includes persons who reported in one of the Asian or Pacific Islander groups listed on the questionnaire or who provided write-in responses such as Thai, Nepali, or Tongan. A more detailed listing of the groups comprising the Asian or Pacific Islander population is presented in figure 2 below. In some data products, information is presented separately for the Asian population and the Pacific Islander population.

Asian--Includes "Chinese," "Filipino," "Japanese," "Asian Indian," "Korean," "Vietnamese," and "Other Asian." In some tables, "Other Asian" may not be shown separately, but is included in the total Asian population.

Chinese--Includes persons who indicated their race as "Chinese" or who identified themselves as Cantonese, Tibetan, or Chinese American. In standard census reports, persons who reported as "Taiwanese" or "Formosan" are included here with Chinese. In special reports on the Asian or Pacific Islander population, information on persons who identified themselves as Taiwanese are shown separately.

Filipino--Includes persons who indicated their race as "Filipino" or reported entries such as Philipino, Philippine, or Filipino American.

Japanese--Includes persons who indicated their race as "Japanese" and persons who identified themselves as Nipponese or Japanese American.

Asian Indian--Includes persons who indicated their race as "Asian Indian" and persons who identified themselves as Bengalese, Bharat, Dravidian, East Indian, or Goanese.

Korean--Includes persons who indicated their race as "Korean" and persons who identified themselves as Korean American.

Vietnamese--Includes persons who indicated their race as "Vietnamese" and persons who identified themselves as Vietnamese American.

Cambodian--Includes persons who provided a write-in response such as Cambodian or Cambodia.

Hmong--Includes persons who provided a write-in response such as Hmong, Laohmong, or Mong.

Laotian--Includes persons who provided a write-in response such as Laotian, Laos, or Lao.

Thai--Includes persons who provided a write-in response such as Thai, Thailand, or Siamese.

Other Asian--Includes persons who provided a write-in response of Bangladeshi, Burmese, Indonesian, Pakistani, Sri Lankan, Amerasian, or Eurasian. See figure 2 for other groups comprising "Other Asian."

Pacific Islander--Includes persons who indicated their race as "Pacific Islander" by classifying themselves into one of the following groups or identifying themselves as one of the Pacific Islander cultural groups of Polynesian, Micronesian, or Melanesian.

Hawaiian--Includes persons who indicated their race as "Hawaiian" as well as persons who identified themselves as Part Hawaiian or Native Hawaiian.

Samoa--Includes persons who indicated their race as "Samoa" or persons who identified themselves as American Samoa or Western Samoa.

Guamanian--Includes persons who indicated their race as "Guamanian" or persons who identified themselves as Chamorro or Guam.

Other Pacific Islander--Includes persons who provided a write-in response of a Pacific Islander group such as Tahitian, Northern Mariana Islander, Palauan, Fijian, or a cultural group such as Polynesian, Micronesian, or Melanesian. See figure 2 for other groups comprising "Other Pacific Islander."

Other Race--Includes all other persons not included in the "White," "Black," "American Indian, Eskimo, or Aleut," and the "Asian or Pacific Islander" race categories described above.

Persons reporting in the "Other race" category and providing write-in entries such as multiracial, multiethnic, mixed, interracial, Wesort, or a Spanish/Hispanic origin group (such as Mexican, Cuban, or Puerto Rican) are included here.

Written entries to three categories on the race item--"Indian (Amer.)," "Other Asian or Pacific Islander (API)," and "Other race"--were reviewed, edited, and coded by subject matter specialists. (For more information on the coding operation, see the section below that discusses "Comparability.")

The written entries under "Indian (Amer.);" and "Other Asian or Pacific Islander (API)" were reviewed and coded during 100-percent processing of the 1990 census questionnaires. A substantial portion of the entries for the "Other race" category also were reviewed, edited, and coded during the 100-percent processing. The remaining entries under "Other race" underwent review and coding during sample processing. Most of the written entries reviewed and coded during sample processing were those indicating Hispanic origin such as Mexican, Cuban, or Puerto Rican.

If the race entry for a member of a household was missing on the questionnaire, race was assigned based upon the reported entries of race by other household members using specific rules of precedence of household relationship. For example, if race was missing for the daughter of the householder, then the race of her mother (as female householder or female spouse) would be assigned. If there was no female householder or spouse in the household, the daughter would be assigned her father's (male householder) race. If race was not reported for anyone in the household, the race of a householder in a previously processed household was assigned. This procedure is a variation of the general imputation procedures described in Appendix C, Accuracy of the Data.

Limitation of the Data--In the 1980 census, a relatively high proportion (20 percent) of American Indians did not report any tribal entry in the race item. Evaluation of the pre-census tests indicated that changes made for the 1990 race item should improve the reporting of tribes in the rural areas (especially on reservations) for the 1990 census. The results for urban areas were inconclusive. Also, the precensus tests indicated that there may be overreporting of the Cherokee tribe. An evaluation of 1980

census data showed overreporting of Cherokee in urban areas or areas where the number of American Indians was sparse.

In the 1990 census, respondents sometimes did not fill in a circle or filled the "Other race" circle and wrote in a response, such as Arab, Polish, or African American in the shared write-in box for "Other race" and "Other API" responses. During the automated coding process, these responses were edited and assigned to the appropriate racial designation. Also, some Hispanic origin persons did not fill in a circle, but provided entries such as Mexican or Puerto Rican. These persons were classified in the "Other race" category during the coding and editing process. There may be some minor differences between sample data and 100-percent data because sample processing included additional edits not included in the 100-percent processing.

Figure 2. Asian or Pacific Islander Groups Reported in the 1990 Census

Asian	Pacific Islander
Chinese	Hawaiian
Filipino	Samoa
Japanese	Guamanian
Asian Indian	Other Pacific Islander(1)
Korean	Carolinian
Vietnamese	Fijian
Cambodian	Kosraean
Hmong	Melanesian(3)
Laotian	Micronesian(3)
Thai	Northern Mariana Islander
Other Asian(1)	Palauan
Bangladeshi	Papua New Guinean
Bhutanese	Ponapean (Pohnpeian)
Borneo	Polynesian(3)
Burmese	Solomon Islander
Celebesian	Tahitian
Ceram	Tarawa Islander
Indochinese	Tokelauan
Indonesian	Tongan
Iwo-Jiman	Trukese (Chuukese)
Javanese	Yapese
Malayan	Pacific Islander, not specified
Maldivian	
Nepali	
Okinawan	
Pakistani	
Sikkim	
Singaporean	
Sri Lankan	
Sumatran	
Asian, not specified(2)	

(1)In some data products, specific groups listed under "Other Asian" or "Other Pacific Islander" are shown separately. Groups not shown are tabulated as "All other Asian" or "All other Pacific Islander," respectively.

(2)Includes entries such as Asian American, Asian, Asiatic, Amerasian, and Eurasian.

(3)Polynesian, Micronesian, and Melanesian are Pacific Islander cultural groups.

Comparability--Differences between the 1990 census and earlier censuses affect the comparability of data for certain racial groups and American Indian tribes. The 1990 census was the first census to undertake, on a 100-percent basis, an automated review, edit, and coding operation for written responses to the race item. The automated coding system used in the 1990 census greatly reduced the potential for error associated with a clerical review. Specialists with a thorough knowledge of the race subject matter reviewed, edited, coded, and resolved inconsistent or incomplete responses. In the 1980 census, there was only a limited clerical review of the race responses on the 100-percent forms with a full clerical review conducted only on the sample questionnaires.

Another major difference between the 1990 and preceding censuses is the handling of the write-in responses for the Asian or Pacific Islander populations. In addition to the nine Asian or Pacific Islander categories shown on the questionnaire under the spanner "Asian or Pacific Islander (API)," the 1990 census race item provided a new residual category, "Other API," for Asian or Pacific Islander persons who did not report in one of the listed Asian or Pacific Islander groups. During the coding operation, write-in responses for "Other API" were reviewed, coded, and assigned to the appropriate classification. For example, in 1990, a write-in entry of Laotian, Thai, or Javanese is classified as "Other Asian," while a write-in entry of Tongan or Fijian is classified as "Other Pacific Islander." In the 1990 census, these persons were able to identify as "Other API" in both the 100-percent and sample operations.

In the 1980 census, the nine Asian or Pacific Islander groups were also listed separately. However, persons not belonging to these nine groups wrote in their specific racial group under the "Other" race category. Persons with a written entry such as Laotian, Thai, or Tongan, were tabulated and published as "Other race" in the 100-percent processing operation in 1980, but were reclassified as "Other Asian and Pacific Islander" in 1980 sample tabulations. In 1980 special reports on the Asian or Pacific Islander populations, data were shown separately for "Other Asian" and "Other Pacific Islander."

The 1970 questionnaire did not have separate race categories for Asian Indian, Vietnamese, Samoan, and Guamanian. These persons indicated their race in the "Other" category and later, through the editing process, were assigned to a specific group. For example, in 1970, Asian Indians were reclassified as "White," while Vietnamese, Guamanians, and Samoans were included in the "Other" category.

Another difference between 1990 and preceding censuses is the approach taken when persons of Spanish/Hispanic origin did not report in a specific race category but reported as "Other race" or "Other." These persons commonly provided a write-in entry such as Mexican, Venezuelan, or Latino. In the 1990 and 1980 censuses, these entries remained in the "Other race" or "Other" category, respectively. In the 1970 census, most of these persons were included in the "White" category.

REFERENCE WEEK

The data on labor force status and journey to work were related to the reference week; that is, the calendar week preceding the date on which the respondents completed their questionnaires or were interviewed by enumerators. This week is not the same for all respondents since the enumeration was not completed in one week. The occurrence of holidays during the enumeration period could affect the data on actual hours worked during the reference week, but probably had no effect on overall measurement of employment status (see the discussion below on "Comparability").

Comparability--The reference weeks for the 1990 and 1980 censuses differ in that Passover and Good Friday occurred in the first week of April 1980, but in the second week of April 1990. Many workers presumably took time off for those observances. The differing occurrence of these holidays could affect the comparability of the 1990 and 1980 data on actual hours worked for some areas if the respective weeks were the reference weeks for a significant number of persons. The holidays probably did not affect the overall measurement of employment status since this information was based on work activity during the entire reference week.

RESIDENCE IN 1985

The data on residence in 1985 were derived from answers to question 14b, which asked for the State (or foreign country), county, and place of residence on April 1, 1985, for those persons reporting in question 14a that on that date they lived in a different house than their current residence. Residence in 1985 is used in conjunction with location of current residence to determine the extent of residential mobility of the population and the resulting redistribution of the population across the various States, metropolitan areas, and regions of the country.

When no information on residence in 1985 was reported for a person, information for other family members, if available, was used to assign a location of residence in 1985. All cases of nonresponse or incomplete response that were not assigned a previous residence based on information from other family members were allocated the previous residence of another person with similar characteristics who provided complete information.

The tabulation category, "Same house," includes all persons 5 years old and over who did not move during the 5 years as well as those who had moved but by 1990 had returned to their 1985 residence. The category, "Different house in the United States," includes persons who lived in the United States in 1985 but in a different house or apartment from the one they occupied on April 1, 1990. These movers are then further subdivided according to the type of move.

In most tabulations, movers are divided into three groups according to their 1985 residence: "Different house, same county," "Different county, same State," and "Different State." The last group may be further subdivided into region of residence in 1985. The category, "Abroad," includes those persons who were residing in a foreign country, Puerto Rico,

or an outlying area of the U.S. in 1985, including members of the Armed Forces and their dependents. Some tabulations show movers who were residing in Puerto Rico or an outlying area in 1985 separately from those residing in other countries.

In tabulations for metropolitan areas, movers are categorized according to the metropolitan status of their current and previous residences, resulting in such groups as movers within an MSA/PMSA, movers between PMSA's, movers from nonmetropolitan areas to MSA/PMSA, and movers from central cities to the remainder of an MSA/PMSA. In some tabulations, these categories are further subdivided by size of MSA/PMSA, region of current or previous residence, or movers within or between central cities and the remainder of the same or a different MSA/PMSA.

The size categories used in some tabulations for both 1985 and 1990 residence refer to the populations of the MSA/PMSA on April 1, 1990; that is, at the end of the migration interval.

Some tabulations present data on immigrants, outmigrants, and net migration. "Immigrants" are generally defined as those persons who entered a specified area by crossing its boundary from some point outside the area. In some tabulations, movers from abroad are included in the number of immigrants; in others, only movers within the United States are included.

"Outmigrants" are persons who depart from a specific area by crossing its boundary to a point outside it, but without leaving the United States. "Net migration" is calculated by subtracting the number of outmigrants from the number of immigrants and, depending upon the particular tabulation, may or may not include movers from abroad. The net migration for the area is net immigration if the result was positive and net outmigration if the result was negative. In the tabulations, net outmigration is indicated by a minus sign (-).

Immigrants and outmigrants for States include only those persons who did not live in the same State in 1985 and 1990; that is, they exclude persons who moved between counties within the same State. Thus, the sum of the immigrants to (or outmigrants from) all counties in any State is greater than the number of immigrants to (or outmigrants from) that State. However, in the case of net migration, the sum of the nets for all the counties within a State equal the net for the State. In the same fashion, the net migration for a division or region equals the sum of the nets for the States comprising that division or region, while the number of immigrants and outmigrants for that division or region is less than the sum of the immigrants or outmigrants for the individual States.

The number of persons who were living in a different house in 1985 is somewhat less than the total number of moves during the 5-year period. Some persons in the same house at the two dates had moved during the 5-year period but by the time of the census had returned to their 1985 residence. Other persons who were living in a different house had made one or more intermediate moves. For similar reasons, the number of persons living in a different county, MSA/PMSA, or State or moving

between nonmetropolitan areas may be understated.

Comparability--Similar questions were asked on all previous censuses beginning in 1940, except the questions in 1950 referred to residence 1 year earlier rather than 5 years earlier. Although the questions in the 1940 census covered a 5-year period, comparability with that census was reduced somewhat because of different definitions and categories of tabulation. Comparability with the 1960 and 1970 census is also somewhat reduced because nonresponse was not allocated in those earlier censuses. For the 1980 census, nonresponse was allocated in a manner similar to the 1990 allocation scheme.

SCHOOL ENROLLMENT AND LABOR FORCE STATUS

Tabulation of data on enrollment, educational attainment, and labor force status for the population 16 to 19 years old allows for calculation of the proportion of the age group who are not enrolled in school and not high school graduates or "dropouts" and an unemployment rate for the "dropout" population. Definitions of the three topics and descriptions of the census items from which they were derived are presented in "Educational Attainment," "Employment Status," and "School Enrollment and Type of School." The published tabulations include both the civilian and Armed Forces populations, but labor force status is provided for the civilian population only. Therefore, the component labor force statuses may not add to the total lines enrolled in school, high school graduate, and not high school graduate. The difference is Armed Forces.

Comparability--The tabulation of school enrollment by labor force status is similar to that published in 1980 census reports. The 1980 census tabulation included a single data line for Armed Forces; however, enrollment, attainment, and labor force status data were shown for the civilian population only. In 1970, a tabulation was included for 16 to 21 year old males not attending school.

SCHOOL ENROLLMENT AND TYPE OF SCHOOL

Data on school enrollment were derived from answers to questionnaire item 11, which was asked of a sample of persons. Persons were classified as enrolled in school if they reported attending a "regular" public or private school or college at any time between February 1, 1990, and the time of enumeration. The question included instructions to "include only nursery school, kindergarten, elementary school, and schooling which would lead to a high school diploma or a college degree" as regular school. Instructions included in the 1990 respondent instruction guide, which was mailed with the census questionnaire, further specified that enrollment in a trade or business school, company training, or tutoring were not to be included unless the course would be accepted for credit at a regular elementary school, high school, or college. Persons who did not answer the enrollment question were assigned the enrollment status and type of school of a person with the same age, race or Hispanic origin, and, at older ages, sex, whose residence was in the same or a nearby area.

Public and Private School--Includes persons who attended school in the reference period and indicated they were enrolled by marking one of the questionnaire categories for either "public school, public college" or "private school, private college." The instruction guide defines a public school as "any school or college controlled and supported by a local, county, State, or Federal Government." "Schools supported and controlled primarily by religious organizations or other private groups" are defined as private. Persons who filled both the "public" and "private" circles are edited to the first entry, "public."

Level of School in Which Enrolled--Persons who were enrolled in school were classified as enrolled in "preprimary school," "elementary or high school," or "college" according to their response to question 12 (years of school completed or highest degree received). Persons who were enrolled and reported completing nursery school or less were classified as enrolled in "preprimary school," which includes kindergarten. Similarly, enrolled persons who had completed at least kindergarten, but not high school, were classified as enrolled in elementary or high school. Enrolled persons who reported completing high school or some college or having received a post-secondary degree were classified as enrolled in "college." Enrolled persons who reported completing the twelfth grade but receiving "NO DIPLOMA" were classified as enrolled in high school. (For more information on level of school, see the discussion under "Educational Attainment.")

Comparability--School enrollment questions have been included in the census since 1840; grade attended was first asked in 1940; type of school was first asked in 1960. Before 1940, the enrollment question in various censuses referred to attendance in the preceding six months or the preceding year. In 1940, the reference was to attendance in the month preceding the census, and in the 1950 and subsequent censuses, the question referred to attendance in the two months preceding the census date.

Until the 1910 census, there were no instructions limiting the kinds of schools in which enrollment was to be counted. Starting in 1910, the instructions indicated that attendance at "school, college, or any educational institution" was to be counted. In 1930 an instruction to include "night school" was added. In the 1940 instructions, night school, extension school, or vocational school were included only if the school was part of the regular school system. Correspondence school work of any kind was excluded. In the 1950 instructions, the term "regular school" was introduced, and it was defined as schooling which "advances a person towards an elementary or high school diploma or a college, university, or professional school degree." Vocational, trade, or business schools were excluded unless they were graded and considered part of a regular school system. On-the-job training was excluded, as was nursery school. Instruction by correspondence was excluded unless it was given by a regular school and counted towards promotion.

In 1960, the question used the term "regular school or college" and a similar, though expanded, definition of "regular" was included in the instructions, which continued to exclude nursery school. Because of the census' use of mailed questionnaires, the 1960 census was the first in which instructions were written for the

respondent as well as enumerators. In the 1970 census, the questionnaire used the phrase "regular school or college" and included instructions to "count nursery school, kindergarten, and schooling which leads to an elementary school certificate, high school diploma, or college degree." Instructions in a separate document specified that to be counted as regular school, nursery school must include instruction as an important and integral phase of its program, and continued the exclusion of vocational, trade, and business schools. The 1980 census question was very similar to the 1970 question, but the separate instruction booklet did not require that nursery school include substantial instructional content in order to be counted.

The age range for which enrollment data have been obtained and published has varied over the censuses. Information on enrollment was recorded for persons of all ages in the 1930 and 1940 and 1970 through 1990; for persons under age 30, in 1950; and for persons age 5 to 34, in 1960. Most of the published enrollment figures referred to persons age 5 to 20 in the 1930 census, 5 to 24 in 1940, 5 to 29 in 1950, 5 to 34 in 1960, 3 to 34 in 1970, and 3 years old and over in 1980. This growth in the age group whose enrollment was reported reflects increased interest in the number of children in preprimary schools and in the number of older persons attending colleges and universities.

In the 1950 and subsequent censuses, college students were enumerated where they lived while attending college, whereas in earlier censuses, they generally were enumerated at their parental homes. This change should not affect the comparability of national figures on college enrollment since 1940; however, it may affect the comparability over time of enrollment figures at sub-national levels.

Type of school was first introduced in the 1960 census, where a separate question asked the enrolled persons whether they were in a "public" or "private" school. Since the 1970 census, the type of school was incorporated into the response categories for the enrollment question and the terms were changed to "public," "parochial," and "other private." In the 1980 census, "private, church related" and "private, not church related" replaced "parochial" and "other private."

Grade of enrollment was first available in the 1940 census, where it was obtained from responses to the question on highest grade of school completed. Enumerators were instructed that "for a person still in school, the last grade completed will be the grade preceding the one in which he or she was now enrolled." From 1950 to 1980, grade of enrollment was obtained from the highest grade attended in the two-part question used to measure educational attainment. (For more information, see the discussion under "Educational Attainment.") The form of the question from which level of enrollment was derived in the 1990 census most closely corresponds to the question used in 1940. While data from prior censuses can be aggregated to provide levels of enrollment comparable to the 1990 census, 1990 data cannot be disaggregated to show single grade of enrollment as in previous censuses.

Data on school enrollment were also collected and published by other Federal, State, and local government agencies. Where these data were obtained from administrative records of school systems and institutions of higher learning, they were only roughly comparable with data from population censuses and household surveys because of differences in definitions and concepts, subject matter covered, time references, and enumeration methods. At the local level, the difference between the location of the institution and the residence of the student may affect the comparability of census and administrative data. Differences between the boundaries of school districts and census geographic units also may affect these comparisons.

SELF-CARE LIMITATION STATUS

The data on self-care limitation status were derived from answers to questionnaire item 19b, which was asked of a sample of persons 15 years old and over. Persons were identified as having a self-care limitation if they had a health condition that had lasted for 6 or more months and which made it difficult to take care of their own personal needs, such as dressing, bathing, or getting around inside the home.

The term "health condition" referred to both physical and mental conditions. A temporary health problem, such as a broken bone that was expected to heal normally was not considered a health condition.

Comparability--This was the first time that a question on self-care limitation was included in the census.

SEX

The data on sex were derived from answers to questionnaire item 3, which was asked of all persons. For most cases in which sex was not reported, it was determined by the appropriate entry from the person's given name and household relationship. Otherwise, sex was imputed according to the relationship to the householder and the age and marital status of the person. For more information on imputation, see Appendix C, Accuracy of the Data.

Sex Ratio--A measure derived by dividing the total number of males by the total number of females and multiplying by 100.

Comparability--A question on the sex of individuals has been asked of the total population in every census.

VETERAN STATUS

Data on veteran status, period of military service, and years of military service were derived from answers to questionnaire item 17, which was asked of a sample of persons.

Veteran Status--The data on veteran status were derived from responses to question 17a. For census data products, a "civilian veteran" is a person 16 years old or over who had served (even for a short time) but is not now serving on active duty in the U.S. Army, Navy, Air Force, Marine Corps,

or the Coast Guard, or who served as a Merchant Marine seaman during World War II. Persons who served in the National Guard or military Reserves are classified as veterans only if they were ever called or ordered to active duty not counting the 4-6 months for initial training or yearly summer camps. All other civilians 16 years old and over are classified as nonveterans.

Period of Military Service--Persons who indicated in question 17a that they had served on active duty (civilian veterans) or were now on active duty were asked to indicate in question 17b the period or periods in which they served. Persons serving in at least one wartime period are classified in their most recent wartime period. For example, persons who served both during the Korean conflict and the post-Korean peacetime era between February 1955 and July 1964 are classified in one of the two "Korean conflict" categories. If the same person had also served during the Vietnam era, he or she would instead be included in the "Vietnam era and Korean conflict" category. The responses were edited to eliminate inconsistencies between reported period(s) of service and the age of the person and to cancel out reported combinations of periods containing unreasonable gaps (for example, a person could not serve during World War I and the Korean conflict without serving during World War II). Note that the period of service categories shown in this report are mutually exclusive.

Years of Military Service--Persons who indicated in question 17a that they had served on active duty (civilian veterans) or were now on active duty were asked to report the total number of years of active-duty service in question 17c. The data were edited for consistency with responses to question 17b (Period of Military Service) and with the age of the person.

Limitation of the Data--There may be a tendency for the following kinds of persons to report erroneously that they served on active duty in the Armed Forces: (a) persons who served in the National Guard or military Reserves but were never called to active duty; (b) civilian employees or volunteers for the USO, Red Cross, or the Department of Defense (or its predecessor Departments, War and Navy); and (c) employees of the Merchant Marine or Public Health Service. There may also be a tendency for persons to erroneously round up months to the nearest year in question 17c (for example, persons with 1 year 8 months of active duty military service may mistakenly report "2 years").

Comparability--Since census data on veterans were based on self-reported responses, they may differ from data from other sources such as administrative records of the Department of Defense. Census data may also differ from Veterans Administration data on the benefits-eligible population, since factors determining eligibility for veterans benefits differ from the rules for classifying veterans in the census.

The wording of the question on veteran status (17a) for 1990 was expanded from the veteran/not veteran question in 1980 to include questions on current active duty status and service in the military Reserves and the National Guard. The expansion was intended to clarify the appropriate response for persons in the Armed Forces and for persons who served in the National Guard or military Reserve units

only. For the first time in a census, service during World War II as a Merchant Marine Seaman was considered active-duty military service and persons with such service were counted as veterans. An additional period of military service, "September 1980 or later" was added in 1990. As in 1970 and 1980, persons reporting more than one period of service are shown in the most recent wartime period of service category. Question 17c (Years of Military Service) was new for 1990.

WORK DISABILITY STATUS

The data on work disability were derived from answers to questionnaire item 18, which was asked of a sample of persons 15 years old and over. Persons were identified as having a work disability if they had a health condition that had lasted for 6 or more months and which limited the kind or amount of work they could do at a job or business. A person was limited in the kind of work he or she could do if the person had a health condition which restricted his or her choice of jobs. A person was limited in the amount of work if he or she was not able to work full-time. Persons with a work disability were further classified as "Prevented from working" or "Not prevented from working."

The term "health condition" referred to both physical and mental conditions. A temporary health problem, such as a broken bone that was expected to heal normally, was not considered a health condition.

Comparability--The wording of the question on work disability was the same in 1990 as in 1980. Information on work disability was first collected in 1970. In that census, the work disability question did not contain a clause restricting the definition of disability to limitations caused by a health condition that had lasted 6 or more months; however, it did contain a separate question about the duration of the disability.

WORK STATUS IN 1989

The data on work status in 1989 were derived from answers to questionnaire item 31, which was asked of a sample of persons. Persons 16 years old and over who worked 1 or more weeks according to the criteria described below are classified as "Worked in 1989." All other persons 16 years old and over are classified as "Did not work in 1989." Some tabulations showing work status in 1989 include 15 year olds; these persons, by definition, are classified as "Did not work in 1989."

Weeks Worked in 1989

The data on weeks worked in 1989 were derived from responses to questionnaire item 31b. Question 31b (Weeks Worked in 1989) was asked of persons 16 years old and over who indicated in question 31a that they worked in 1989.

The data pertain to the number of weeks during 1989 in which a person did any work for pay or profit (including paid vacation and paid sick leave) or worked without pay on a family farm or in a family business.

Weeks of active service in the Armed Forces are also included.

Usual Hours Worked Per Week Worked in 1989

The data on usual hours worked per week worked in 1989 were derived from answers to questionnaire item 31c. This question was asked of persons 16 years old and over who indicated that they worked in 1989.

The data pertain to the number of hours a person usually worked during the weeks worked in 1989. The respondent was to report the number of hours worked per week in the majority of the weeks he or she worked in 1989. If the hours worked per week varied considerably during 1989, the respondent was to report an approximate average of the hours worked per week. The statistics on usual hours worked per week in 1989 are not necessarily related to the data on actual hours worked during the census reference week (question 21b).

Persons 16 years old and over who reported that they usually worked 35 or more hours each week during the weeks they worked are classified as "Usually worked full time;" persons who reported that they usually worked 1 to 34 hours are classified as "Usually worked part time."

Year-Round Full-Time Workers--All persons 16 years old and over who usually worked 35 hours or more per week for 50 to 52 weeks in 1989.

Number of Workers in Family in 1989--The term "worker" as used for these data is defined based on the criteria for Work Status in 1989.

Limitation of the Data--It is probable that the number of persons who worked in 1989 and the number of weeks worked are understated since there was some tendency for respondents to forget intermittent or short periods of employment or to exclude weeks worked without pay. There may also be a tendency for persons not to include weeks of paid vacation among their weeks worked; one result may be that the census figures may understate the number of persons who worked "50 to 52 weeks."

Comparability--The data on weeks worked collected in the 1990 census were comparable with data from the 1980, 1970, and 1960 censuses, but may not be entirely comparable with data from the 1940 and 1950 censuses. Since the 1960 census, two separate questions have been used to obtain this information. The first identified persons with any work experience during the year and, thus, indicated those persons for whom the questions on number of weeks worked applied. In 1940 and 1950, however, the questionnaires contained only a single question on number of weeks worked.

In 1970, persons responded to the question on weeks worked by indicating one of six weeks-worked intervals. In 1980 and 1990, persons were asked to enter the specific number of weeks they worked.

YEAR OF ENTRY

The data on year of entry were derived from answers to questionnaire

item 10, which was asked of a sample of persons. The question, "When did this person come to the United States to stay?" was asked of persons who indicated in the question on citizenship that they were not born in the United States. (For more information, see the discussion under "Citizenship.")

The 1990 census questions, tabulations, and census data products about citizenship and year of entry include no reference to immigration. All persons who were born and resided outside the United States before becoming residents of the United States have a date of entry. Some of these persons are U.S. citizens by birth (e.g., persons born in Puerto Rico or born abroad of American parents). To avoid any possible confusion concerning the date of entry of persons who are U.S. citizens by birth, the term, "year of entry" is used in this report instead of the term "year of immigration."

Limitation of the Data--The census questions on nativity, citizenship, and year of entry were not designed to measure the degree of permanence of residence in the United States. The phrase, "to stay" was used to obtain the year in which the person became a resident of the United States. Although the respondent was directed to indicate the year he or she entered the country "to stay," it was difficult to ensure that respondents interpreted the phrase correctly.

Comparability--A question on year of entry, (alternately called "year of immigration") was asked in each decennial census from 1890 to 1930, 1970, and 1980. In 1980, the question on year of entry included six arrival time intervals. The number of arrival intervals was expanded to ten in 1990. In 1980, the question on year of entry was asked only of the foreign-born population. In 1990, all persons who responded to the long-form questionnaire and were not born in the United States were to complete the question on year of entry.

HOUSING CHARACTERISTICS

LIVING QUARTERS

Living quarters are classified as either housing units or group quarters. (For more information, see the discussion of "Group Quarters" under Population Characteristics.) Usually, living quarters are in structures intended for residential use (for example, a one-family home, apartment house, hotel or motel, boarding house, or mobile home). Living quarters also may be in structures intended for nonresidential use (for example, the rooms in a warehouse where a guard lives), as well as in places such as tents, vans, shelters for the homeless, dormitories, barracks, and old railroad cars.

Housing Units--A housing unit is a house, an apartment, a mobile home or trailer, a group of rooms or a single room occupied as separate living quarters or, if vacant, intended for occupancy as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from outside the building or through a common hall.

The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements. For vacant units, the criteria of separateness and direct access are applied to the intended occupants whenever possible. If that information cannot be obtained, the criteria are applied to the previous occupants.

Both occupied and vacant housing units are included in the housing unit inventory, except that recreational vehicles, boats, vans, tents, railroad cars, and the like are included only if they are occupied as someone's usual place of residence. Vacant mobile homes are included provided they are intended for occupancy on the site where they stand. Vacant mobile homes on dealers' sales lots, at the factory, or in storage yards are excluded from the housing inventory.

If the living quarters contains nine or more persons unrelated to the householder or person in charge (a total of at least 10 unrelated persons), it is classified as group quarters. If the living quarters contains eight or fewer persons unrelated to the householder or person in charge, it is classified as a housing unit.

Occupied Housing Units--A housing unit is classified as occupied if it is the usual place of residence of the person or group of persons living in it at the time of enumeration, or if the occupants are only temporarily absent; that is, away on vacation or business. If all the persons staying in the unit at the time of the census have their usual place of residence elsewhere, the unit is classified as vacant. A household includes all the persons who occupy a housing unit as their usual place of residence. By definition, the count of occupied housing units for 100-percent tabulations is the same as the count of households or householders. In sample tabulations, the counts of household and occupied housing units may vary slightly because of different sample weighting methods.

Vacant Housing Units--A housing unit is vacant if no one is living in it at the time of enumeration, unless its occupants are only temporarily absent. Units temporarily occupied at the time of enumeration entirely by persons who have a usual residence elsewhere also are classified as vacant. (For more information, see discussion under "Usual Home Elsewhere.")

New units not yet occupied are classified as vacant housing units if construction has reached a point where all exterior windows and doors are installed and final usable floors are in place. Vacant units are excluded if they are open to the elements; that is, the roof, walls, windows, and/or doors no longer protect the interior from the elements, or if there is positive evidence (such as a sign on the house or in the block) that the unit is condemned or is to be demolished. Also excluded are quarters being used entirely for nonresidential purposes, such as a store or an office, or quarters used for the storage of business supplies or inventory, machinery, or agricultural products.

Hotels, Motels, Rooming Houses, Etc.--Occupied rooms or suites of rooms in hotels, motels, and similar places are classified as housing units only when occupied by permanent residents; that is, persons who consider the hotel as their usual place of residence or have no usual place of residence

elsewhere. Vacant rooms or suites of rooms are classified as housing units only in those hotels, motels, and similar places in which 75 percent or more of the accommodations are occupied by permanent residents.

If any of the occupants in a rooming or boarding house live and eat separately from others in the building and have direct access, their quarters are classified as separate housing units.

Staff Living Quarters--The living quarters occupied by staff personnel within any group quarters are separate housing units if they satisfy the housing unit criteria of separateness and direct access; otherwise, they are considered group quarters.

Comparability--The first Census of Housing in 1940 established the "dwelling unit" concept. Although the term became "housing unit" and the definition has been modified slightly in succeeding censuses, the 1990 definition is essentially comparable to previous censuses. There was no change in the housing unit definition between 1980 and 1990.

ACREAGE

The data on acreage were obtained from questionnaire items H5a and H19a. Question H5a was asked at all occupied and vacant one-family houses and mobile homes. Question H19a was asked on a sample basis at occupied and vacant one-family houses and mobile homes.

Question H5a asks whether the house or mobile home is located on a place of 10 or more acres. The intent of this item is to exclude owner-occupied and renter-occupied one-family houses on 10 or more acres from the specified owner- and renter-occupied universes for value and rent tabulations.

Question H19a provides data on whether the unit is located on less than 1 acre. The main purpose of this item, in conjunction with question H19b on agricultural sales, is to identify farm units. (For more information, see discussion under "Farm Residence.")

For both items, the land may consist of more than one tract or plot. These tracts or plots are usually adjoining; however, they may be separated by a road, creek, another piece of land, etc.

Comparability--

Question H5a is similar to that asked in 1970 and 1980. This item was asked for the first time of mobile home occupants in 1990. Question H19a is an abbreviated form of a question asked on a sample basis in 1980. In previous censuses, information on city or suburban lot and number of acres was obtained also.

AGRICULTURAL SALES

Data on the sales of agricultural crops were obtained from questionnaire item H19b, which was asked on a sample basis at occupied one-family houses and mobile homes located on lots of 1 acre or more.

Data for this item exclude units on lots of less than 1 acre, units located in structures containing 2 or more units, and all vacant units. This item refers to the total amount (before taxes and expenses) received in 1989 from the sale of crops, vegetables, fruits, nuts, livestock and livestock products, and nursery and forest products, produced on "this property." Respondents new to a unit were asked to estimate total agricultural sales in 1989 even if some portion of the sales had been made by other occupants of the unit.

This item is used mainly to classify housing units as farm or nonfarm residences, not to provide detailed information on the sale of agricultural products. Detailed information on the sale of agricultural products is provided by the Census Bureau's Census of Agriculture (Factfinder for the Nation: Agricultural Statistics, Bureau of the Census, 1989). (For more information, see the discussion under "Farm Residence.")

BEDROOMS

The data on bedrooms were obtained from questionnaire item H9, which was asked at both occupied and vacant housing units. This item was asked on a sample basis. The number of bedrooms is the count of rooms designed to be used as bedrooms; that is, the number of rooms that would be listed as bedrooms if the house or apartment were on the market for sale or for rent. Included are all rooms intended to be used as bedrooms even if they currently are being used for some other purpose. A housing unit consisting of only one room, such as a one-room efficiency apartment, is classified, by definition, as having no bedroom.

Comparability--Data on bedrooms have been collected in every census since 1960. In 1970 and 1980, data for bedrooms were shown only for year-round units. In past censuses, a room was defined as a bedroom if it was used mainly for sleeping even if also used for other purposes. Rooms that were designed to be used as bedrooms but used mainly for other purposes were not considered to be bedrooms. A distribution of housing units by number of bedrooms calculated from data collected in a 1986 test showed virtually no differences in the two versions except in the two bedroom category, where the previous "use" definition showed a slightly lower proportion of units.

BOARDED-UP STATUS

Boarded-up status was obtained from questionnaire item C2 and was determined for all vacant units. Boarded-up units have windows and doors covered by wood, metal, or masonry to protect the interior and to prevent entry into the building. A single-unit structure, a unit in a multi-unit structure, or an entire multi-unit structure may be boarded-up in this way. For certain census data products, boarded-up units are shown only for units in the "Other vacant" category. A unit classified as "Usual home elsewhere" can never be boarded up. (For more information, see the discussion under "Usual Home Elsewhere.")

Comparability--This item was first asked in the 1980 census and was shown only for year-round vacant housing units. In 1990, data are shown for all vacant housing units.

BUSINESS ON PROPERTY

The data for business on property were obtained from questionnaire item H5b, which was asked at all occupied and vacant one-family houses and mobile homes. This question is used to exclude owner-occupied one-family houses with business or medical offices on the property from certain statistics on financial characteristics.

A business must be easily recognizable from the outside. It usually will have a separate outside entrance and have the appearance of a business, such as a grocery store, restaurant, or barber shop. It may be either attached to the house or mobile home or be located elsewhere on the property. Those housing units in which a room is used for business or professional purposes and have no recognizable alterations to the outside are not considered as having a business. Medical offices are considered businesses for tabulation purposes.

Comparability--Data on business on property have been collected since 1940.

CONDOMINIUM FEE

The data on condominium fee were obtained from questionnaire item H25, which was asked at owner-occupied condominiums. This item was asked on a sample basis. A condominium fee normally is charged monthly to the owners of the individual condominium units by the condominium owners association to cover operating, maintenance, administrative, and improvement costs of the common property (grounds, halls, lobby, parking areas, laundry rooms, swimming pool, etc.) The costs for utilities and/or fuels may be included in the condominium fee if the units do not have separate meters.

Data on condominium fees may include real estate tax and/or insurance payments for the common property, but do not include real estate taxes or fire, hazard, and flood insurance for the individual unit already reported in questions H21 and H22.

Amounts reported were the regular monthly payment, even if paid by someone outside the household or remain unpaid. Costs were estimated as closely as possible when exact costs were not known.

The data from this item were added to payments for mortgages (both first and junior mortgages and home equity loans); real estate taxes; fire, hazard, and flood insurance payments; and utilities and fuels to derive "Selected Monthly Owner Costs" and "Selected Monthly Owner Costs as a Percentage of Household Income in 1989" for condominium owners.

Comparability--This is a new item in 1990.

CONDOMINIUM STATUS

The data on condominium housing units were obtained from questionnaire item H18, which was asked on a sample basis at both occupied and vacant housing units. Condominium is a type of ownership that enables a person to own an apartment or house in a development of similarly owned units and to hold a common or joint ownership in some or all of the common areas and facilities such as land, roof, hallways, entrances, elevators, swimming pool, etc. Condominiums may be single-family houses as well as units in apartment buildings. A condominium unit need not be occupied by the owner to be counted as such. A unit classified as "mobile home or trailer" or "other" (see discussion under "Units in Structure") cannot be a condominium unit.

Limitation of the Data--Testing done prior to the 1980 and 1990 censuses indicated that the number of condominiums may be slightly overstated.

Comparability--In 1970, condominiums were grouped together with cooperative housing units, and the data were reported only for owner-occupied cooperatives and condominiums. Beginning in 1980, the census identified all condominium units and the data were shown for renter-occupied and vacant year-round condominiums as well as owner occupied. In 1970 and 1980, the question on condominiums was asked on a 100-percent basis. In 1990, it was asked on a sample basis.

CONTRACT RENT

The data on contract rent (also referred to as "rent asked" for vacant units) were obtained from questionnaire item H7a, which was asked at all occupied housing units that were rented for cash rent and all vacant housing units that were for rent at the time of enumeration.

Housing units that are renter occupied without payment of cash rent are shown separately as "No cash rent" in census data products. The unit may be owned by friends or relatives who live elsewhere and who allow occupancy without charge. Rent-free houses or apartments may be provided to compensate caretakers, ministers, tenant farmers, sharecroppers, or others.

Contract rent is the monthly rent agreed to or contracted for, regardless of any furnishings, utilities, fees, meals, or services that may be included. For vacant units, it is the monthly rent asked for the rental unit at the time of enumeration.

If the contract rent includes rent for a business unit or for living quarters occupied by another household, the respondent was instructed to report that part of the rent estimated to be for his or her unit only. Respondents were asked to report rent only for the housing unit enumerated and to exclude any rent paid for additional units or for business premises.

If a renter pays rent to the owner of a condominium or cooperative, and the condominium fee or cooperative carrying charge is also paid by the renter to the owner, the respondent was instructed to include the fee

or carrying charge.

If a renter receives payments from lodgers or roomers who are listed as members of the household, the respondent was instructed to report the rent without deduction for any payments received from the lodgers or roomers. The respondent was instructed to report the rent agreed to or contracted for even if paid by someone else such as friends or relatives living elsewhere, or a church or welfare agency.

In some tabulations, contract rent is presented for all renter-occupied housing units, as well as specified renter-occupied and vacant-for-rent units. Specified renter-occupied and specified vacant-for-rent units exclude one-family houses on 10 or more acres. (For more information on rent, see the discussion under "Gross Rent.")

Median and Quartile Contract Rent--The median divides the rent distribution into two equal parts.

Quartiles divide the rent distribution into four equal parts. In computing median and quartile contract rent, units reported as "No cash rent" are excluded. Median and quartile rent calculations are rounded to the nearest whole dollar. (For more information on medians and quartiles, see the discussion under "Derived Measures.")

Aggregate Contract Rent--To calculate aggregate contract rent, the amount assigned for the category "Less than \$80" is \$50. The amount assigned to the category "\$1,000 or more" is \$1,250. Mean contract rent is rounded to the nearest whole dollar. (For more information on aggregates and means, see the discussion under "Derived Measures.")

Limitation of the Data--In the 1970 and 1980 censuses, contract rent for vacant units had high allocation rates, about 35 percent.

Comparability--Data on this item have been collected since 1930. For 1990, quartiles were added because the range of rents and values in the United States has increased in recent years. Upper and lower quartiles can be used to note large rent and value differences among various geographic areas.

DURATION OF VACANCY

The data for duration of vacancy (also referred to as "months vacant") were obtained from questionnaire item D, which was completed by census enumerators. The statistics on duration of vacancy refer to the length of time (in months and years) between the date the last occupants moved from the unit and the time of enumeration. The data, therefore, do not provide a direct measure of the total length of time units remain vacant.

For newly constructed units which have never been occupied, the duration of vacancy is counted from the date construction was completed. For recently converted or merged units, the time is reported from the date conversion or merger was completed. Units occupied by an entire household with a usual home elsewhere are assigned to the "Less than 1 month" interval.

Comparability--Similar data have been collected since 1960. In 1970 and 1980, these data were shown only for year-round vacant housing units. In 1990, these data are shown for all vacant housing units.

FARM RESIDENCE

The data on farm residence were obtained from questionnaire items H19a and H19b. An occupied one-family house or mobile home is classified as a farm residence if: (1) the housing unit is located on a property of 1 acre or more, and (2) at least \$1,000 worth of agricultural products were sold from the property in 1989. Group quarters and housing units that are in multi-unit buildings or vacant are not included as farm residences.

A one-family unit occupied by a tenant household paying cash rent for land and buildings is enumerated as a farm residence only if sales of agricultural products from its yard (as opposed to the general property on which it is located) amounted to at least \$1,000 in 1989. A one-family unit occupied by a tenant household that does not pay cash rent is enumerated as a farm residence if the remainder of the farm (including its yard) qualifies as a farm.

Farm residence is provided as an independent data item only for housing units located in rural areas. It may be derived for housing units in urban areas from the data items on acreage and sales of agricultural products on the public-use microdata sample (PUMS) files. (For more information on PUMS, see Appendix F, Data Products and User Assistance.)

The farm population consists of persons in households living in farm residences. Some persons who are counted on a property classified as a farm (including in some cases farm workers) are excluded from the farm population. Such persons include those who reside in multi-unit buildings or group quarters.

Comparability--These are the same criteria that were used to define a farm residence in 1980. In 1960 and 1970, a farm was defined as a place of 10 or more acres with at least \$50 worth of agricultural sales or a place of less than 10 acres with at least \$250 worth of agricultural sales. Earlier censuses used other definitions. Note that the definition of a farm residence differs from the definition of a farm in the Census of Agriculture (Factfinder for the Nation: Agricultural Statistics, Bureau of the Census, 1989).

GROSS RENT

Gross rent is the contract rent plus the estimated average monthly cost of utilities (electricity, gas, and water) and fuels (oil, coal, kerosene, wood, etc.) if these are paid for by the renter (or paid for the renter by someone else). Gross rent is intended to eliminate differentials which result from varying practices with respect to the inclusion of utilities and fuels as part of the rental payment. The estimated costs of utilities and fuels are reported on a yearly basis

but are converted to monthly figures for the tabulations. Renter units occupied without payment of cash rent are shown separately as "No cash rent" in the tabulations. Gross rent is calculated on a sample basis.

Comparability--Data on gross rent have been collected since 1940 for renter-occupied housing units. In 1980, costs for electricity and gas were collected as average monthly costs. In 1990, all utility and fuel costs were collected as yearly costs and divided by 12 to provide an average monthly cost.

GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1989

Gross rent as a percentage of household income in 1989 is a computed ratio of monthly gross rent to monthly household income (total household income in 1989 divided by 12). The ratio was computed separately for each unit and was rounded to the nearest whole percentage. Units for which no cash rent is paid and units occupied by households that reported no income or a net loss in 1989 comprise the category "Not computed." This item is calculated on a sample basis.

HOUSE HEATING FUEL

The data on house heating fuel were obtained from questionnaire item H14, which was asked at occupied housing units. This item was asked on a sample basis. The data show the type of fuel used most to heat the house or apartment.

Utility Gas--Includes gas piped through underground pipes from a central system to serve the neighborhood.

Bottled, Tank, or LP Gas--Includes liquid propane gas stored in bottles or tanks which are refilled or exchanged when empty.

Fuel Oil, Kerosene, Etc.--Includes fuel oil, kerosene, gasoline, alcohol, and other combustible liquids.

Wood--Includes purchased wood, wood cut by household members on their property or elsewhere, driftwood, sawmill or construction scraps, or the like.

Solar Energy--Includes heat provided by sunlight which is collected, stored, and actively distributed to most of the rooms.

Other Fuel--Includes all other fuels not specified elsewhere.

No Fuel Used--Includes units that do not use any fuel or that do not have heating equipment.

Comparability--Data on house heating fuel have been collected since 1940. The category, "Solar energy" is new for 1990.

INSURANCE FOR FIRE, HAZARD, AND FLOOD

The data on fire, hazard, and flood insurance were obtained from questionnaire item H22, which was asked at a sample of owner-occupied one-family houses, condominiums, and mobile homes. The statistics for this item refer to the annual premium for fire, hazard, and flood insurance on the property (land and buildings); that is, policies that protect the property and its contents against loss due to damage by fire, lightning, winds, hail, flood, explosion, and so on.

Liability policies are included only if they are paid with the fire, hazard, and flood insurance premiums and the amounts for fire, hazard, and flood cannot be separated. Premiums are included even if paid by someone outside the household or remain unpaid. When premiums are paid on other than a yearly basis, the premiums are converted to a yearly basis.

The payment for fire, hazard, and flood insurance is added to payments for real estate taxes, utilities, fuels, and mortgages (both first and junior mortgages and home equity loans) to derive "Selected Monthly Owner Costs" and "Selected Monthly Owner Costs as a Percentage of Household Income in 1989."

A separate question (H23d) determines whether insurance premiums are included in the mortgage payment to the lender(s). This makes it possible to avoid counting these premiums twice in the computations.

Comparability--Data on payment for fire and hazard insurance were collected for the first time in 1980. Flood insurance was not specifically mentioned in the wording of the question in 1980. The question was asked only at owner-occupied one-family houses. Excluded were mobile homes, condominiums, houses with a business or medical office on the property, houses on 10 or more acres, and housing units in multi-unit buildings. In 1990, the question was asked of all one-family owner-occupied houses, including houses on 10 or more acres. It also was asked at mobile homes, condominiums, and one-family houses with a business or medical office on the property.

KITCHEN FACILITIES

Data on kitchen facilities were obtained from questionnaire item H11, which was asked at both occupied and vacant housing units. A unit has complete kitchen facilities when it has all of the following: (1) an installed sink with piped water, (2) a range, cook top and convection or microwave oven, or cookstove, and (3) a refrigerator. All kitchen facilities must be located in the structure. They need not be in the same room. Portable cooking equipment is not considered a range or cookstove. An ice box is not considered to be a refrigerator.

Comparability--Data on complete kitchen facilities were collected for the first time in 1970. Earlier censuses collected data on individual components, such as kitchen sink and type of refrigeration equipment. In 1970 and 1980, data for kitchen facilities were shown only for year-round units. In 1990, data are shown for all housing units.

MEALS INCLUDED IN RENT

The data on meals included in the rent were obtained from questionnaire item H7b, which was asked of all occupied housing units that were rented for cash and all vacant housing units that were for rent at the time of enumeration.

The statistics on meals included in rent are presented for specified renter-occupied and specified vacant-for-rent units. Specified renter-occupied and specified vacant-for-rent units exclude one-family houses on 10 or more acres. (For more information, see the discussion under "Contract Rent.")

Comparability--This is a new item in 1990. It is intended to measure "congregate" housing, which generally is considered to be housing units where the rent includes meals and other services, such as transportation to shopping and recreation.

MOBILE HOME COSTS

The data on mobile home costs were obtained from questionnaire item H26, which was asked at owner-occupied mobile homes. This item was asked on a sample basis.

These data include the total yearly costs for personal property taxes, land or site rent, registration fees, and license fees on all owner-occupied mobile homes. The instructions are to not include real estate taxes already reported in question H21.

Costs are estimated as closely as possible when exact costs are not known. Amounts are the total for an entire 12-month billing period, even if they are paid by someone outside the household or remain unpaid.

The data from this item are added to payments for mortgages, real estate taxes, fire, hazard, and flood insurance payments, utilities, and fuels to derive selected monthly owner costs for mobile homes owners.

Comparability--This item is new for 1990.

MORTGAGE PAYMENT

The data on mortgage payment were obtained from questionnaire item H23b, which was asked at owner occupied one-family houses, condominiums, and mobile homes. This item was asked on a sample basis. Question H23b provides the regular monthly amount required to be paid the lender for the first mortgage (deed of trust, contract to purchase, or similar debt) on the property. Amounts are included even if the payments are delinquent or paid by someone else. The amounts reported are included in the computation of "Selected Monthly Owner Costs" and "Selected Monthly Owner Costs as a Percentage of Household Income in 1989" for units with a mortgage.

The amounts reported include everything paid to the lender including principal and interest payments, real estate taxes, fire, hazard, and flood insurance payments, and mortgage insurance premiums. Separate questions determine whether real estate taxes and fire, hazard, and flood insurance payments are included in the mortgage payment to the lender. This makes it possible to avoid counting these components twice in the computation of "Selected Monthly Owner Costs."

Comparability--Information on mortgage payment was collected for the first time in 1980. It was collected only at owner-occupied one-family houses. Excluded were mobile homes, condominiums, houses with a business or medical office on the property, one-family houses on 10 or more acres, and housing units in multi-unit buildings. In 1990, the questions on monthly mortgage payments were asked of all owner-occupied one-family houses, including one-family houses on 10 or more acres. They were also asked at mobile homes, condominiums, and one-family houses with a business or medical office.

The 1980 census obtained total regular monthly mortgage payments, including payments on second or junior mortgages, from a single question. Two questions were used in 1990; one for regular monthly payments on first mortgages, and one for regular monthly payments on second or junior mortgages or home equity loans. (For more information, see the discussion under "Second or Junior Mortgage Payment.")

MORTGAGE STATUS

The data on mortgage status were obtained from questionnaire items H23a and H24a, which were asked at owner-occupied one-family houses, condominiums, and mobile homes. "Mortgage" refers to all forms of debt where the property is pledged as security for repayment of the debt. It includes such debt instruments as deeds of trust, trust deeds, contracts to purchase, land contracts, junior mortgages and home equity loans.

A mortgage is considered a first mortgage if it has prior claim over any other mortgage or if it is the only mortgage on the property. All other mortgages, (second, third, etc.) are considered junior mortgages. A home equity loan is generally a junior mortgage. If no first mortgage is reported, but a junior mortgage or home equity loan is reported, then the loan is considered a first mortgage.

In most census data products, the tabulations for "Selected Monthly Owner Costs" and "Selected Monthly Owner Costs as a Percentage of Household Income in 1989" usually are shown separately for units "with a mortgage" and for units "not mortgaged." The category "not mortgaged" is comprised of housing units owned free and clear of debt.

Comparability--A question on mortgage status was included in the 1940 and 1950 censuses, but not in the 1960 and 1970 censuses. The item was reinstated in 1980 along with a separate question dealing with the existence of second or junior mortgages. In 1980, the mortgage status questions were asked at owner-occupied one-family houses on less than

10 acres. Excluded were mobile homes, condominiums, houses with a business or medical office, houses on 10 or more acres, and housing units in multi-unit buildings. In 1990, the questions were asked of all one-family owner-occupied housing units, including houses on 10 or more acres. They were also asked at mobile homes, condominiums, and houses with a business or medical office.

PERSONS IN UNIT

This item is based on the 100-percent count of persons in occupied housing units. All persons occupying the housing unit are counted, including the householder, occupants related to the householder, and lodgers, roomers, boarders, and so forth.

The data on "persons in unit" show the number of housing units occupied by the specified number of persons. The phrase "persons in unit" is used for housing tabulations, "persons in households" for population items. Figures for "persons in unit" match those for "persons in household" for 100-percent data products. In sample products, they may differ because of the weighting process.

Median Persons in Unit--In computing median persons in unit, a whole number is used as the midpoint of an interval; thus, a unit with 4 persons is treated as an interval ranging from 3.5 to 4.5 persons. Median persons is rounded to the nearest hundredth. (For more information on medians, see the discussion under "Derived Measures.")

Persons in Occupied Housing Units--This is the total population minus those persons living in group quarters. "Persons per occupied housing unit" is computed by dividing the population living in housing units by the number of occupied housing units.

PERSONS PER ROOM

"Persons per room" is obtained by dividing the number of persons in each occupied housing unit by the number of rooms in the unit. Persons per room is rounded to the nearest hundredth. The figures shown refer, therefore, to the number of occupied housing units having the specified ratio of persons per room.

Mean Persons Per Room--This is computed by dividing persons in housing units by the aggregate number of rooms. This is intended to provide a measure of utilization. A higher mean may indicate a greater degree of utilization or crowding; a low mean may indicate under-utilization. (For more information on means, see the discussion under "Derived Measures.")

PLUMBING FACILITIES

The data on plumbing facilities were obtained from questionnaire item H10, which was asked at both occupied and vacant housing units. This item was asked on a sample basis. Complete plumbing facilities include hot and cold piped water, a flush toilet, and a bathtub or shower. All three facilities must be located inside the house, apartment, or mobile home, but not necessarily in the same room.

Housing units are classified as lacking complete plumbing facilities when any of the three facilities are not present.

Comparability--The 1990 data on complete plumbing facilities are not strictly comparable with the 1980 data. In 1980, complete plumbing facilities were defined as hot and cold piped water, a bathtub or shower, and a flush toilet in the housing unit for the exclusive use of the residents of that unit. In 1990, the Census Bureau dropped the requirement of exclusive use from the definition of complete plumbing facilities. Of the 2.3 million year-round housing units classified in 1980 as lacking complete plumbing for exclusive use, approximately 25 percent of these units had complete plumbing but the facilities were also used by members of another household. From 1940 to 1970, separate and more detailed questions were asked on piped water, bathing, and toilet facilities. In 1970 and 1980, the data on plumbing facilities were shown only for year-round units.

POVERTY STATUS OF HOUSEHOLDS IN 1989

The data on poverty status of households were derived from answers to the income questions. The income items were asked on a sample basis. Households are classified below the poverty level when the total 1989 income of the family or of the nonfamily householder is below the appropriate poverty threshold. The income of persons living in the household who are unrelated to the householder is not considered when determining the poverty status of a household, nor does their presence affect the household size in determining the appropriate poverty threshold. The poverty thresholds vary depending upon three criteria: size of family, number of children, and age of the family householder or unrelated individual for one and two-persons households. (For more information, see the discussion of "Poverty Status in 1989" and "Income in 1989" under Population Characteristics.)

REAL ESTATE TAXES

The data on real estate taxes were obtained from questionnaire item H21, which was asked at owner-occupied one-family houses, condominiums, and mobile homes. The statistics from this question refer to the total amount of all real estate taxes on the entire property (land and buildings) payable in 1989 to all taxing jurisdictions, including special assessments, school taxes, county taxes, and so forth.

Real estate taxes include State, local, and all other real estate taxes even if delinquent, unpaid, or paid by someone who is not a member of the household. However, taxes due from prior years are not included. If taxes are paid on other than a yearly basis, the payments are converted to a yearly basis.

The payment for real estate taxes is added to payments for fire, hazard, and flood insurance; utilities and fuels; and mortgages (both first and junior mortgages and home equity loans) to derive "Selected Monthly Owner Costs" and "Selected Monthly Owner Costs as a Percentage of Household Income in 1989." A separate question (H23c) determines whether real estate taxes are included in

the mortgage payment to the lender(s). This makes it possible to avoid counting taxes twice in the computations.

Comparability--Data for real estate taxes were collected for the first time in 1980. The question was asked only at owner-occupied one-family houses. Excluded were mobile homes or trailers, condominiums, houses with a business or medical office on the property, houses on 10 or more acres, and housing units in multi-unit buildings. In 1990, the question was asked of all one-family owner-occupied houses, including houses on 10 or more acres. It also was asked at mobile homes, condominiums, and one-family houses with a business or medical office on the property.

ROOMS

The data on rooms were obtained from questionnaire item H3, which was asked at both occupied and vacant housing units. The statistics on rooms are in terms of the number of housing units with a specified number of rooms. The intent of this question is to count the number of whole rooms used for living purposes.

For each unit, rooms include living rooms, dining rooms, kitchens, bedrooms, finished recreation rooms, enclosed porches suitable for year-round use, and lodger's rooms. Excluded are strip or pullman kitchens, bathrooms, open porches, balconies, halls or foyers, half-rooms, utility rooms, unfinished attics or basements, or other unfinished space used for storage. A partially divided room is a separate room only if there is a partition from floor to ceiling, but not if the partition consists solely of shelves or cabinets.

Median Rooms--This measure divides the room distribution into two equal parts, one-half of the cases falling below the median number of rooms and one-half above the median. In computing median rooms, the whole number is used as the midpoint of the interval; thus, the category "3 rooms" is treated as an interval ranging from 2.5 to 3.5 rooms. Median rooms is rounded to the nearest tenth. (For more information on medians, see the discussion under "Derived Measures.")

Aggregate Rooms--To calculate aggregate rooms, an arbitrary value of "10" is assigned to rooms for units falling within the terminal category, "9 or more." (For more information on aggregates and means, see the discussion under "Derived Measures.")

Comparability--Data on rooms have been collected since 1940. In 1970 and 1980, these data were shown only for year-round housing units. In 1990, these data are shown for all housing units.

SECOND OR JUNIOR MORTGAGE PAYMENT

The data on second or junior mortgage payments were obtained from questionnaire items H24a and H24b, which were asked at owner-occupied one-family houses, condominiums, and mobile homes. Question H24a asks whether a second or junior mortgage or a home equity loan exists on the property. Question H24b provides the regular monthly amount required to be paid to the lender on all second or junior mortgages and home equity

loans. Amounts are included even if the payments are delinquent or paid by someone else. The amounts reported are included in the computation of "Selected Monthly Owner Costs" and "Selected Monthly Owner Costs as a Percentage of Household Income in 1989" for units with a mortgage.

All mortgages other than first mortgages are classified as "junior" mortgages. A second mortgage is a junior mortgage that gives the lender a claim against the property that is second to the claim of the holder of the first mortgage. Any other junior mortgage(s) would be subordinate to the second mortgage. A home equity loan is a line of credit available to the borrower that is secured by real estate. It may be placed on a property that already has a first or second mortgage, or it may be placed on a property that is owned free and clear.

If the respondents answered that no first mortgage existed, but a second mortgage did (as in the above case with a home equity loan), a computer edit assigned the unit a first mortgage and made the first mortgage monthly payment the amount reported in the second mortgage. The second mortgage data were then made "No" in question H24a and blank in question H24b.

Comparability--The 1980 census obtained total regular monthly mortgage payments, including payments on second or junior mortgages, from one single question. Two questions were used in 1990: one for regular monthly payments on first mortgages, and one for regular monthly payments on second or junior mortgages and home equity loans.

SELECTED MONTHLY OWNER COSTS

The data on selected monthly owner costs were obtained from questionnaire items H20 through H26 for a sample of owner-occupied one-family houses, condominiums, and mobile homes. Selected monthly owner costs is the sum of payments for mortgages, deeds of trust, contracts to purchase, or similar debts on the property (including payments for the first mortgage, second or junior mortgages, and home equity loans); real estate taxes; fire, hazard, and flood insurance on the property; utilities (electricity, gas, and water); and fuels (oil, coal, kerosene, wood, etc.). It also includes, where appropriate, the monthly condominium fee for condominiums and mobile home costs (personal property taxes, site rent, registration fees, and license fees) for mobile homes.

In certain tabulations, selected monthly owner costs are presented separately for specified owner-occupied housing units (owner-occupied one-family houses on fewer than 10 acres without a business or medical office on the property), owner-occupied condominiums, and owner-occupied mobile homes. Data usually are shown separately for units "with a mortgage" and for units "not mortgaged."

Median Selected Monthly Owner Costs--This measure is rounded to the nearest whole dollar.

Comparability--The components of selected monthly owner costs were collected for the first time in 1980. The 1990 tabulations of selected monthly owner costs for specified owner-occupied housing units are virtually identical to 1980, the primary difference was the amounts of the first and second mortgages were collected in separate questions in 1990, while the amounts were collected in a single question in 1980. The component parts of the item were tabulated for mobile homes and condominiums for the first time in 1990.

In 1980, costs for electricity and gas were collected as average monthly costs. In 1990, all utility and fuel costs were collected as yearly costs and divided by 12 to provide an average monthly cost.

SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1989

The information on selected monthly owner costs as a percentage of household income in 1989 is the computed ratio of selected monthly owner costs to monthly household income in 1989. The ratio was computed separately for each unit and rounded to the nearest whole percentage. The data are tabulated separately for specified owner-occupied units, condominiums, and mobile homes.

Separate distributions are often shown for units "with a mortgage" and for units "not mortgaged." Units occupied by households reporting no income or a net loss in 1989 are included in the "not computed" category. (For more information, see the discussion under "Selected Monthly Owner Costs.")

Comparability--The components of selected monthly owner costs were collected for the first time in 1980. The tabulations of "Selected Monthly Owner Costs as a Percentage of Household Income in 1989" for specified owner-occupied housing units are comparable to 1980.

SEWAGE DISPOSAL

The data on sewage disposal were obtained from questionnaire item H16, which was asked at both occupied and vacant housing units. This item was asked on a sample basis. Housing units are either connected to a public sewer, to a septic tank or cesspool, or they dispose of sewage by other means. A public sewer may be operated by a government body or by a private organization. A housing unit is considered to be connected to a septic tank or cesspool when the unit is provided with an underground pit or tank for sewage disposal. The category, "Other means" includes housing units which dispose of sewage in some other way.

Comparability--Data on sewage disposal have been collected since 1940. In 1970 and 1980, data were shown only for year-round housing units. In 1990, data are shown for all housing units.

SOURCE OF WATER

The data on source of water were obtained from questionnaire item H15, which was asked at both occupied and vacant housing units. Housing

units may receive their water supply from a number of sources. A common source supplying water to five or more units is classified as a "Public system or private company." The water may be supplied by a city, county, water district, water company, etc., or it may be obtained from a well which supplies water to five or more housing units. If the water is supplied from a well serving four or fewer housing units, the units are classified as having water supplied by either an "Individual drilled well" or an "Individual dug well." Drilled wells or small diameter wells are usually less than 1-1/2 feet in diameter. Dug wells are usually larger than 1-1/2 feet wide and generally hand dug. The category, "Some other source" includes water obtained from springs, creeks, rivers, lakes, cisterns, etc.

Comparability--Data on source of water have been collected since 1940. In 1970 and 1980, data were shown only for year-round housing units. In 1990, data are shown for all housing units.

TELEPHONE IN HOUSING UNIT

The data on telephones were obtained from questionnaire item H12, which was asked at occupied housing units. This item was asked on a sample basis. A telephone must be inside the house or apartment for the unit to be classified as having a telephone. Units where the respondent uses a telephone located inside the building but not in the respondent's living quarters are classified as having no telephone.

Comparability--Data on telephones in 1980 are comparable to 1990. The 1960 and 1970 censuses collected data on telephone availability. A unit was classified as having a telephone available if there was a telephone number on which occupants of the unit could be reached. The telephone could have been in another unit, in a common hall, or outside the building.

TENURE

The data for tenure were obtained from questionnaire item H4, which was asked at all occupied housing units. All occupied housing units are classified as either owner occupied or renter occupied.

Owner Occupied--A housing unit is owner occupied if the owner or co-owner lives in the unit even if it is mortgaged or not fully paid for. The owner or co-owner must live in the unit and usually is the person listed in column 1 of the questionnaire. The unit is "Owned by you or someone in this household with a mortgage or loan" if it is being purchased with a mortgage or some other debt arrangement such as a deed of trust, trust deed, contract to purchase, land contract, or purchase agreement. The unit is also considered owned with a mortgage if it is built on leased land and there is a mortgage on the unit.

A housing unit is "Owned by you or someone in this household free and clear (without a mortgage)" if there is no mortgage or other similar debt on the house, apartment, or mobile home including units built on leased land if the unit is owned outright without a mortgage.

Although owner-occupied units are divided between mortgaged and owned free and clear on the questionnaire, census data products containing 100-percent data show only total owner-occupied counts. More extensive mortgage information was collected on the long-form questionnaire and are shown in census products containing sample data. (For more information, see the discussion under "Mortgage Status.")

Renter Occupied--All occupied housing units which are not owner occupied, whether they are rented for cash rent or occupied without payment of cash rent, are classified as renter occupied. "No cash rent" units are separately identified in the rent tabulations. Such units are generally provided free by friends or relatives or in exchange for services such as resident manager, caretaker, minister, or tenant farmer. Housing units on military bases also are classified in the "No cash rent" category. "Rented for cash rent" includes units in continuing care, sometimes called life care arrangements. These arrangements usually involve a contract between one or more individuals and a health services provider guaranteeing the individual shelter, usually a house or apartment, and services, such as meals or transportation to shopping or recreation.

Comparability--Data on tenure have been collected since 1890. In 1970, the question on tenure also included a category for condominium and cooperative ownership. In 1980, condominium units and cooperatives were dropped from the tenure item, and since 1980, only condominium units are identified in a separate question.

For 1990, the response categories were expanded to allow the respondent to report whether the unit was owned with a mortgage or free and clear (without a mortgage). The distinction between units owned with a mortgage and units owned free and clear was added in 1990 to improve the count of owner-occupied units. Research after the 1980 census indicated some respondents did not consider their units owned if they had a mortgage.

UNITS IN STRUCTURE

The data on units in structure (also referred to as "type of structure") were obtained from questionnaire item H2, which was asked at all housing units. A structure is a separate building that either has open spaces on all sides or is separated from other structures by dividing walls that extend from ground to roof. In determining the number of units in a structure, all housing units, both occupied and vacant, are counted. Stores and office space are excluded.

The statistics are presented for the number of housing units in structures of specified type and size, not for the number of residential buildings.

1-Unit, Detached--This is a 1-unit structure detached from any other house; that is, with open space on all four sides. Such structures are considered detached even if they have an adjoining shed or garage. A one-family house that contains a business is considered detached as long as the building has

open space on all four sides. Mobile homes or trailers to which one or more permanent rooms have been added or built also are included.

1-Unit, Attached--This is a 1-unit structure that has one or more walls extending from ground to roof separating it from adjoining structures. In row houses (sometimes called townhouses), double houses, or houses attached to nonresidential structures, each house is a separate, attached structure if the dividing or common wall goes from ground to roof.

2 or More Units--These are units in structures containing 2 or more housing units, further categorized as units in structures with 2, 3 or 4, 5 to 9, 10 to 19, 20 to 49, and 50 or more units.

Mobile Home or Trailer--Both occupied and vacant mobile homes to which no permanent rooms have been added are counted in this category. Mobile homes or trailers used only for business purposes or for extra sleeping space and mobile homes or trailers for sale on a dealer's lot, at the factory, or in storage are not counted in the housing inventory.

Other--This category is for any living quarters occupied as a housing unit that does not fit the previous categories. Examples that fit this category are houseboats, railroad cars, campers, and vans.

Comparability--Data on units in structure have been collected since 1940 and on mobile homes and trailers since 1950. In 1970 and 1980, these data were shown only for year-round housing units. In 1990, these data are shown for all housing units. In 1980, the data were collected on a sample basis. The category, "Boat, tent, van, etc." was replaced in 1990 by the category "Other." In some areas, the proportion of units classified as "Other" is far larger than the number of units that were classified as "Boat, tent, van, etc." in 1980.

USUAL HOME ELSEWHERE

The data for usual home elsewhere are obtained from questionnaire item B, which was completed by census employees. A housing unit temporarily occupied at the time of enumeration entirely by persons with a usual residence elsewhere is classified as vacant. The occupants are classified as having a "Usual home elsewhere" and are counted at the address of their usual place of residence. Typical examples are people in a vacation home, persons renting living quarters temporarily for work, and migrant workers.

Limitation of the Data--Evidence from previous censuses suggests that in some areas enumerators marked units as "vacant--usual home elsewhere" when they should have marked "vacant--regular."

Comparability--Data for usual home elsewhere was tabulated for the first time in 1980.

UTILITIES

The data on utility costs were obtained from questionnaire items H20a through H20d, which were asked of occupied housing units. These

items were asked on a sample basis.

Questions H20a through H20d asked for the yearly cost of utilities (electricity, gas, water) and other fuels (oil, coal, wood, kerosene, etc.). For the tabulations, these yearly amounts are divided by 12 to derive the average monthly cost and are then included in the computation of "Gross Rent," "Gross Rent as a Percentage of Household Income in 1989," "Selected Monthly Owner Costs," and "Selected Monthly Owner Costs as a Percentage of Household Income in 1989."

Costs are recorded if paid by or billed to occupants, a welfare agency, relatives, or friends. Costs that are paid by landlords, included in the rent payment, or included in condominium or cooperative fees are excluded.

Limitation of the Data--Research has shown that respondents tended to overstate their expenses for electricity and gas when compared to utility company records. There is some evidence that this overstatement is reduced when yearly costs are asked rather than monthly costs. Caution should be exercised in using these data for direct analysis because costs are not reported for certain kinds of units such as renter-occupied units with all utilities included in the rent and owner-occupied condominium units with utilities included in the condominium fee.

Comparability--The data on utility costs have been collected since 1980 for owner-occupied housing units, and since 1940 for renter-occupied housing units. In 1980, costs for electricity and gas were collected as average monthly costs. In 1990, all utility and fuel costs were collected as yearly costs and divided by 12 to provide an average monthly cost.

VACANCY STATUS

The data on vacancy status were obtained from questionnaire item C1, which was completed by census enumerators. Vacancy status and other characteristics of vacant units were determined by enumerators obtaining information from landlords, owners, neighbors, rental agents, and others. Vacant units are subdivided according to their housing market classification as follows:

For Rent--These are vacant units offered "for rent," and vacant units offered either "for rent" or "for sale."

For Sale Only--These are vacant units being offered "for sale only," including units in cooperatives and condominium projects if the individual units are offered "for sale only."

Rented or Sold, Not Occupied--If any money rent has been paid or agreed upon but the new renter has not moved in as of the date of enumeration, or if the unit has recently been sold but the new owner has not yet moved in, the vacant unit is classified as "rented or sold, not occupied."

For Seasonal, Recreational, or Occasional Use--These are vacant units used

or intended for use only in certain seasons or for weekend or other occasional use throughout the year.

Seasonal units include those used for summer or winter sports or recreation, such as beach cottages and hunting cabins. Seasonal units also may include quarters for such workers as herders and loggers. Interval ownership units, sometimes called shared-ownership or time-sharing condominiums, also are included here.

For Migrant Workers--These include vacant units intended for occupancy by migratory workers employed in farm work during the crop season. (Work in a cannery, a freezer plant, or a food-processing plant is not farm work.)

Other Vacant--If a vacant unit does not fall into any of the classifications specified above, it is classified as "other vacant." For example, this category includes units held for occupancy by a caretaker or janitor, and units held for personal reasons of the owner.

Homeowner Vacancy Rate--This is the percentage relationship between the number of vacant units for sale and the total homeowner inventory. It is computed by dividing the number of vacant units for sale only by the sum of the owner-occupied units and the number of vacant units that are for sale only.

Rental Vacancy Rate--This is the percentage relationship of the number of vacant units for rent to the total rental inventory. It is computed by dividing the number of vacant units for rent by the sum of the renter-occupied units and the number of vacant units for rent.

Comparability--Data on vacancy status have been collected since 1940. For 1990, the category, "seasonal/recreational/occasional use" combined vacant units classified in 1980 as "seasonal or migratory" and "held for occasional use." Also, in 1970 and 1980, housing characteristics generally were presented only for year-round units. In 1990, housing characteristics are shown for all housing units.

VALUE

The data on value (also referred to as "price asked" for vacant units) were obtained from questionnaire item H6, which was asked at housing units that were owned, being bought, or vacant for sale at the time of enumeration. Value is the respondent's estimate of how much the property (house and lot, mobile home and lot, or condominium unit) would sell for if it were for sale. If the house or mobile home was owned or being bought, but the land on which it sits was not, the respondent was asked to estimate the combined value of the house or mobile home and the land. For vacant units, value was the price asked for the property.

Value was tabulated separately for all owner-occupied and vacant-for-sale housing units, owner-occupied and vacant-for-sale mobile homes or trailers, and specified owner-occupied and specified vacant-for-sale housing units. Specified owner-occupied and specified vacant-for-sale housing units include only one-family houses on fewer than 10 acres without a business or medical office on the property. The

data for "specified units" exclude mobile homes, houses with a business or medical office, houses on 10 or more acres, and housing units in multi-unit buildings.

Median and Quartile Value--The median divides the value distribution into two equal parts. Quartiles divide the value distribution into four equal parts. These measures are rounded to the nearest hundred dollars. (For more information on medians and quartiles, see the discussion under "Derived Measures.")

Aggregate Value--To calculate aggregate value, the amount assigned for the category "Less than \$10,000" is \$9,000. The amount assigned to the category "\$500,000 or more" is \$600,000. Mean value is rounded to the nearest hundred dollars. (For more information on aggregates and means, see the discussion under "Derived Measures.")

Comparability--In 1980, value was asked only at owner-occupied or vacant-for-sale one-family houses on fewer than 10 acres with no business or medical office on the property and at all owner-occupied or vacant-for-sale condominium housing units. Mobile homes were excluded. Value data were presented for specified owner-occupied housing units, specified vacant-for-sale-only housing units, and owner-occupied condominium housing units.

In 1990, the question was asked at all owner-occupied or vacant-for-sale-only housing units with no exclusions. Data presented for specified owner-occupied and specified vacant-for-sale-only housing units will include one-family condominium houses but not condominiums in multi-unit structures since condominium units are now identified only in long-form questionnaires.

For 1990, quartiles have been added because the range of values and rents in the United States has increased in recent years. Upper and lower quartiles can be used to note large value and rent differences among various geographic areas.

VEHICLES AVAILABLE

The data on vehicles available were obtained from questionnaire item H13, which was asked at occupied housing units. This item was asked on a sample basis. These data show the number of households with a specified number of passenger cars, vans, and pickup or panel trucks of one-ton capacity or less kept at home and available for the use of household members. Vehicles rented or leased for one month or more, company vehicles, and police and government vehicles are included if kept at home and used for nonbusiness purposes. Dismantled or immobile vehicles are excluded. Vehicles kept at home but used only for business purposes also are excluded.

Vehicles Per Household--This is computed by dividing aggregate vehicles available by the number of occupied housing units.

Limitation of the Data--The 1980 census evaluations showed that the number of automobiles was slightly overreported; the number of vans and trucks slightly underreported. The statistics do not measure the number of

vehicles privately owned or the number of households owning vehicles.

Comparability--Data on automobiles available were collected from 1960 to 1980. In 1980, a separate question also was asked on the number of trucks and vans. The data on automobiles and trucks and vans were presented separately and also as a combined vehicles available tabulation. The 1990 data are comparable to the 1980 vehicles available tabulations.

YEAR HOUSEHOLDER MOVED INTO UNIT

The data on year householder moved into unit were obtained from questionnaire item H8, which was asked at occupied housing units. This item was asked on a sample basis. These data refer to the year of the latest move by the householder. If a householder moved back into a housing unit he or she previously occupied, the year of the latest move was reported. If the householder moved from one apartment to another within the same building, the year the householder moved into the present apartment was reported. The intent is to establish the year the present occupancy by the householder began. The year that the householder moved in is not necessarily the same year other members of the household moved, although in the great majority of cases an entire household moves at the same time.

Comparability--In 1960 and 1970, this question was asked of every person and included in population reports. This item in housing tabulations refers to the year the householder moved in. In 1980 and 1990, the question was asked only of the householder.

YEAR STRUCTURE BUILT

The data on year structure built were obtained from questionnaire item H17, which was asked at both occupied and vacant housing units. This item was asked on a sample basis. Data on year structure built refer to when the building was first constructed, not when it was remodeled, added to, or converted. For housing units under construction that met the housing unit definition--that is, all exterior windows, doors, and final usable floors were in place--the category "1989 or March 1990" was used. For a houseboat or a mobile home or trailer, the manufacturer's model year was assumed to be the year built. The figures shown in census data products relate to the number of units built during the specified periods that were still in existence at the time of enumeration.

Median Year Structure Built--The median divides the distribution into two equal parts. The median is rounded to the nearest calendar year. Median age of housing can be obtained by subtracting median year structure built from 1990. For example, if the median year structure built is 1957, the median age of housing in that area is 33 years (1990 minus 1957).

Limitation of the Data--Data on year structure built are more susceptible to errors of response and nonreporting than data on many other items because respondents must rely on their memory or on estimates by persons who have lived in the neighborhood a long time. Available evidence indicates there is underreporting in the older-year-structure- built

categories, especially "Built in 1939 or earlier." The introduction of the "Don't know" category (see the discussion on "Comparability") may have resulted in relatively higher allocation rates. Data users should refer to the discussion in Appendix C, Accuracy of the Data, and to the allocation tables.

Comparability--Data on year structure built were collected for the first time in the 1940 census. Since then, the response categories have been modified to accommodate the 10-year period between each census. In 1990, the category, "Don't Know," was added in an effort to minimize the response error mentioned in the paragraph above on limitation of the data.

DERIVED MEASURES

Census data products include various derived measures, such as medians, means, and percentages, as well as certain rates and ratios. Derived measures that round to less than 0.1 are not shown but indicated as zero. In printed reports, zero is indicated by a dash (-).

Interpolation

Interpolation frequently is used in calculating medians or quartiles based on interval data and in approximating standard errors from tables. Linear interpolation is used to estimate values of a function between two known values. "Pareto interpolation" is an alternative to linear interpolation. It is used by the Census Bureau in calculating median income within intervals wider than \$2,500. In Pareto interpolation, the median is derived by interpolating between the logarithms of the upper and lower income limits of the median category.

Mean

This measure represents an arithmetic average of a set of values. It is derived by dividing the sum of a group of numerical items (or aggregate) by the total number of items. Aggregates are used in computing mean values. For example, mean family income is obtained by dividing the aggregate of all income reported by persons in families by the total number of families. (Additional information on means and aggregates is included in the separate explanations of many population and housing subjects.)

Median

This measure represents the middle value in a distribution. The median divides the total frequency into two equal parts: one-half of the cases fall below the median and one-half of the cases exceed the median. The median is computed on the basis of the distribution as tabulated, which is sometimes more detailed than the distribution shown in specific census publications and other data products.

In reports, if the median falls within the upper interval of the tabulation distribution, the median is shown as the initial value of

the interval followed by a plus sign (+); if within the lower interval, the median is shown as the upper value of the category followed by a minus sign (-). For summary tape files, if the median falls within the upper or lower interval, it is set to a specified value. (Additional information on medians is included in the separate explanations of many population and housing subjects.)

Percentages, Rates, and Ratios

These measures are frequently presented in census products to compare two numbers or two sets of measurements. These comparisons are made in two ways: (1) subtraction, which provides an absolute measure of the difference between two items, and (2) the quotient of two numbers, which provides a relative measure of difference.

Quartile

This measure divides a distribution into four equal parts. The first quartile (or lower quartile) is the value that defines the upper limit of the lowest one-quarter of the cases. The second quartile is the median. The third quartile (or upper quartile) defines the lower limit of the upper one-quarter of the cases in the distribution. The difference between the upper and lower quartiles is called the interquartile range. This interquartile range is less affected by wide variations than is the mean. Quartiles are presented for certain financial characteristics such as housing value and rent.

LandView™ III Help
Accuracy of the Census Data

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INTRODUCTION

The data contained in this data product are based on the 1990 census sample. The data are estimates of the actual figures that would have been obtained from a complete count. Estimates derived from a sample are expected to be different from the 100-percent figures because they are subject to sampling and nonsampling errors. Sampling error in data arises from the selection of persons and housing units to be included in the sample. Nonsampling error affects both sample and 100-percent data, and is introduced as a result of errors that may occur during the collection and processing phases of the census. Provided below is a detailed discussion of both types of errors and a description of the estimation procedures.

SAMPLE DESIGN

Every person and housing unit in the United States was asked certain basic demographic and housing questions (for example, race, age, marital status, housing value, or rent). A sample of these persons and housing units was asked more detailed questions about such items as income, occupation, and housing costs in addition to the basic demographic and housing information. The primary sampling unit for the 1990 census was the housing unit, including all occupants. For persons living in group quarters, the sampling unit was the person. Persons in group quarters were sampled at a 1-in-6 rate.

The sample designation method depended on the data collection procedures. Approximately 95 percent of the population was enumerated by the mailback procedure. In these areas, the Bureau of the Census either purchased a commercial mailing list, which was updated by the United States Postal Service and Census Bureau field staff, or prepared a mailing list by canvassing and listing each address in the area prior to Census Day. These lists were computerized and the appropriate units were electronically designated as sample units. The questionnaires were either mailed or hand-delivered to the addresses with instructions to

complete and mail back the form.

Housing units in governmental units with a precensus (1988) estimated population of fewer than 2,500 persons were sampled at 1-in-2. Governmental units were defined for sampling purposes as all incorporated places, all counties, all county equivalents such as parishes in Louisiana, and all minor civil divisions in Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin. Housing units in census tracts and block numbering areas (BNA's) with a precensus housing unit count below 2,000 housing units were sampled at 1-in-6 for those portions not in small governmental units (governmental units with a population less than 2,500). Housing units within census tracts and BNA's with 2,000 or more housing units were sampled at 1-in-8 for those portions not in small governmental units.

In list/enumerate areas (about 5 percent of the population), each enumerator was given a blank address register with designated sample lines. Beginning about Census Day, the enumerator systematically canvassed an assigned area and listed all housing units in the address register in the order they were encountered. Completed questionnaires, including sample information for any housing unit listed on a designated sample line, were collected. For all governmental units with fewer than 2,500 persons in list/enumerate areas, a 1-in-2 sampling rate was used. All other list/enumerate areas were sampled at 1-in-6.

Housing units in American Indian reservations, tribal jurisdiction statistical areas, and Alaska Native villages were sampled according to the same criteria as other governmental units, except the sampling rates were based on the size of the American Indian and Alaska Native population in those areas as measured in the 1980 census. Trust lands were sampled at the same rate as their associated American Indian reservations. Census designated places in Hawaii were sampled at the same rate as governmental units because the Census Bureau does not recognize incorporated places in Hawaii.

The purpose of using variable sampling rates was to provide relatively more reliable estimates for small areas and decrease respondent burden in more densely populated areas while maintaining data reliability. When all sampling rates were taken into account across the Nation, approximately one out of every six housing units in the Nation was included in the 1990 census sample.

CONFIDENTIALITY OF THE DATA

To maintain the confidentiality required by law (Title 13, United States Code), the Bureau of the Census applies a confidentiality edit to the 1990 census data to assure that published data do not disclose information about specific individuals, households, or housing units. As a result, a small amount of uncertainty is introduced into the estimates of census characteristics. The sample itself provides adequate protection for most areas for which sample data are published since the resulting data are estimates of the actual counts; however, small areas require more protection. The edit is controlled so that the

basic structure of the data is preserved.

The confidentiality edit is implemented by selecting a small subset of individual households from the internal sample data files and blanking a subset of the data items on these household records. Responses to those data items were then imputed using the same imputation procedures that were used for nonresponse. A larger subset of households is selected for the confidentiality edit for small areas to provide greater protection for these areas. The editing process is implemented in such a way that the quality and usefulness of the data were preserved.

ERRORS IN THE DATA

Since statistics in this data product are based on a sample, they may differ somewhat from 100-percent figures that would have been obtained if all housing units, persons within those housing units, and persons living in group quarters had been enumerated using the same questionnaires, instructions, enumerators, etc. The sample estimate also would differ from other samples of housing units, persons within those housing units, and persons living in group quarters. The deviation of a sample estimate from the average of all possible samples is called the sampling error. The standard error of a sample estimate is a measure of the variation among the estimates from all the possible samples and thus is a measure of the precision with which an estimate from a particular sample approximates the average result of all possible samples. The sample estimate and its estimated standard error permit the construction of interval estimates with prescribed confidence that the interval includes the average result of all possible samples. Described below is the method of calculating standard errors and confidence intervals for the data in this product.

In addition to the variability which arises from the sampling procedures, both sample data and 100-percent data are subject to nonsampling error. Nonsampling error may be introduced during any of the various complex operations used to collect and process census data. For example, operations such as editing, reviewing, or handling questionnaires may introduce error into the data. A detailed discussion of the sources of nonsampling error is given in the section on "Control of Nonsampling Error" in this appendix.

Nonsampling error may affect the data in two ways. Errors that are introduced randomly will increase the variability of the data and should therefore be reflected in the standard error. Errors that tend to be consistent in one direction will make both sample and 100-percent data biased in that direction. For example, if respondents consistently tend to under-report their income, then the resulting counts of households or families by income category will tend to be understated for the higher income categories and overstated for the lower income categories. Such biases are not reflected in the standard error.

Calculation of Standard Errors

Totals and Percentages--Tables A through C in this

appendix contain the information necessary to calculate the standard errors of sample estimates in this data product. To calculate the standard error, it is necessary to know the basic standard error for the characteristic (given in table A or B) that would result under a simple random sample design (of persons, households, or housing units) and estimation technique; the design factor for the particular characteristic estimated (given in table C); and the number of persons or housing units in the tabulation area and the percent of these in the sample. For machine-readable products, the percent-in-sample is included in a data matrix on the file for each tabulation area. In printed reports, the percent-in-sample is provided in data tables at the end of the statistical tables that compose the report. The design factors reflect the effects of the actual sample design and complex ratio estimation procedure used for the 1990 census. Tape purchasers will receive table C, the table of design factors, as a supplement to the technical documentation. Table C is included in this appendix for printed reports.

The steps given below should be used to calculate the standard error of an estimate of a total or a percentage contained in this product. A percentage is defined here as a ratio of a numerator to a denominator where the numerator is a subset of the denominator. For example, the proportion of Black teachers is the ratio of Black teachers to all teachers.

1. Obtain the standard error from table A or B (or use the formula given below the table) for the estimated total or percentage, respectively.
2. Find the geographic area to which the estimate applies in the appropriate percent-in-sample table or appropriate matrix, and obtain the person or housing unit "percent-in-sample" figure for this area. Use the person "percent-in-sample" figure for person and family characteristics. Use the housing unit "percent-in-sample" figure for housing unit characteristics.
3. Use table C to obtain the design factor for the characteristic (for example, employment status, school enrollment) and the range that contains the percent- in-sample with which you are working. Multiply the basic standard error by this factor.

The unadjusted standard errors of zero estimates or of very small estimated totals or percentages will approach zero. This is also the case for very large percentages or estimated totals that are close to the size of the tabulation areas to which they correspond. Nevertheless, these estimated totals and percentages still are subject to sampling and nonsampling variability, and an estimated standard error of zero (or a very small standard error) is not appropriate. For estimated percentages that are less than 2 or greater than 98, use the basic standard errors in table B that appear in the "2 or 98" row. For an estimated total that is less than 50 or within 50 of the total size of the tabulation area, use a basic standard error of 16.

An illustration of the use of the tables is given in the section entitled "Use of Tables to Compute Standard Errors."

Sums and Differences--The standard errors estimated from these tables are not directly applicable to sums of and differences between two sample estimates. To estimate the standard error of a sum or difference, the tables are to be used somewhat differently in the following three situations:

1. For the sum of or difference between a sample estimate and a 100-percent value, use the standard error of the sample estimate. The complete count value is not subject to sampling error.
2. For the sum of or difference between two sample estimates, the appropriate standard error is approximately the square root of the sum of the two individual standard errors squared; that is, for standard errors:

SE_x and SE_y of estimates X and Y :

$$SE_{X \pm Y} = \sqrt{SE_X^2 + SE_Y^2}$$

This method, however, will underestimate (overestimate) the standard error if the two items in a sum are highly positively (negatively) correlated or if the two items in a difference are highly negatively (positively) correlated. This method may also be used for the difference between (or sum of) sample estimates from two censuses or from a census sample and another survey. The standard error for estimates not based on the 1990 census sample must be obtained from an appropriate source outside of this appendix.

For the differences between two estimates, one of which is a subclass of the other, use the tables directly where the calculated difference is the estimate of interest. For example, to determine the estimate of non-Black teachers, one may subtract the estimate of Black teachers from the estimate of total teachers. To determine the standard error of the estimate of non-Black teachers apply the above formula directly.

Ratios--Frequently, the statistic of interest is the ratio of two variables, where the numerator is not a subset of the denominator. For example, the ratio of teachers to students in public elementary schools. The standard error of the ratio between two sample estimates is estimated as follows:

1. If the ratio is a proportion, then follow the procedure outlined for "Totals and Percentages."
2. If the ratio is not a proportion, then approximate the standard error using the formula below.

$$SE[M(\frac{1}{2}X + \frac{1}{2}Y) | M] = \frac{1}{2} \sqrt{SE(X)^2 + SE(Y)^2}$$

Medians--For the standard error of the median of a characteristic, it is necessary to examine the distribution from which the median is derived, as the size of the base and the distribution itself affect the standard error. An approximate method is given here. As the first step, compute one-half of the number on which the median is based (refer to this result as $N/2$). Treat $N/2$ as if it were an ordinary estimate and obtain its standard error as instructed above. Compute the desired confidence interval about $N/2$. Starting with the lowest value of the characteristic, cumulate the frequencies in each category of the characteristic until the sum equals or first exceeds the lower limit of the confidence interval about $N/2$. By linear interpolation, obtain a value of the characteristic corresponding to this sum. This is the lower limit of the confidence interval of the median. In a similar manner, continue cumulating frequencies until the sum equals or exceeds the count in excess of the upper limit of the interval about $N/2$. Interpolate as before to obtain the upper limit of the confidence interval for the estimated median.

When interpolation is required in the upper open-ended interval of a distribution to obtain a confidence bound, use 1.5 times the lower limit of the open-ended confidence interval as the upper limit of the open-ended interval.

Confidence Intervals

A sample estimate and its estimated standard error may be used to construct confidence intervals about the estimate. These intervals are ranges that will contain the average value of the estimated characteristic that results over all possible samples, with a known probability. For example, if all possible samples that could result under the 1990 census sample design were independently selected and surveyed under the same conditions, and if the estimate and its estimated standard error were calculated for each of these samples, then:

1. Approximately 68 percent of the intervals from one estimated standard error below the estimate to one estimated standard error above the estimate would contain the average result from all possible samples;
2. Approximately 90 percent of the intervals from 1.645 times the estimated standard error below the estimate to 1.645 times the estimated standard error above the estimate would contain the average result from all possible samples.
3. Approximately 95 percent of the intervals from two estimated standard errors below the estimate to two estimated standard errors above the estimate would contain the average result from all possible samples.

The intervals are referred to as 68 percent, 90 percent, and 95 percent confidence intervals, respectively.

The average value of the estimated characteristic that could be derived from all possible samples is or is not contained in any particular computed interval. Thus, we cannot make the statement that the average value has a certain probability of falling between the limits of the calculated confidence interval. Rather, one can say with a specified probability of confidence that the calculated confidence interval includes the average estimate from all possible samples (approximately the 100-percent value).

Confidence intervals also may be constructed for the ratio, sum of, or difference between two sample figures. This is done by first computing the ratio, sum, or difference, then obtaining the standard error of the ratio, sum, or difference (using the formulas given earlier), and finally forming a confidence interval for this estimated ratio, sum, or difference as above. One can then say with specified confidence that this interval includes the ratio, sum, or difference that would have been obtained by averaging the results from all possible samples.

The estimated standard errors given in this appendix do not include all portions of the variability due to nonsampling error that may be present in the data. The standard errors reflect the effect of simple response variance, but not the effect of correlated errors introduced by enumerators, coders, or other field or processing personnel. Thus, the standard errors calculated represent a lower bound of the total error. As a result, confidence intervals formed using these estimated standard errors may not meet the stated levels of confidence (i.e., 68, 90, or 95 percent). Thus, some care must be exercised in the interpretation of the data in this data product based on the estimated standard errors.

A standard sampling theory text should be helpful if the user needs more information about confidence intervals and nonsampling errors.

Use of Tables to Compute Standard Errors

The following is a hypothetical example of how to compute a standard error of a total and a percentage. Suppose a particular data table shows that for City A 9,948 persons out of all 15,888 persons age 16 years and over were in the civilian labor force. The percent-in-sample table lists City A with a percent-in-sample of 16.0 percent (Persons column). The column in table C which includes 16.0 percent-in-sample shows the design factor to be 1.1 for "Employment status."

The basic standard error for the estimated total 9,948 may be obtained from table A or from the formula given below table A. In order to avoid interpolation, the use of the formula will be demonstrated here. Suppose that the total population of City A was 21,220. The formula for the basic standard error, SE, is

$$SE = \sqrt{\frac{m(1 - \frac{m}{M})}{M}} = \sqrt{\frac{9,948(1 - \frac{9,948}{21,220})}{21,220}}$$

± 163 persons.

The standard error of the estimated 9,948 persons 16 years and over who were in the civilian labor force is found by multiplying the basic standard error 163 by the design factor, 1.1 from table C. This yields an estimated standard error of 179 for the total number of persons 16 years and over in City A who were in the civilian labor force.

The estimated Percentage of Persons 16 years and over who were in the civilian labor force in City A is 62.6. From table B, the unadjusted standard error is found to be approximately 0.85 percentage points. The standard error for the estimated 62.6 Percentage of Persons 16 years and over who were in the civilian labor force is $0.85 \times 1.1 = 0.94$ percentage points.

A note of caution concerning numerical values is necessary. Standard errors of percentages derived in this manner are approximate. Calculations can be expressed to several decimal places, but to do so would indicate more precision in the data than is justifiable. Final results should contain no more than two decimal places when the estimated standard error is one percentage point (i.e., 1.00) or more.

In the previous example, the standard error of the 9,948 persons 16 years and over in City A who were in the civilian labor force was found to be 179. Thus, a 90 percent confidence interval for this estimated total is found to be:

$$9,948 \pm 1.645 \left(\frac{179}{\sqrt{0.626}} \right)$$

or

$$9,654 \text{ to } 10,242$$

One can say, with about 90 percent confidence, that this interval includes the value that would have been obtained by averaging the results from all possible samples.

The following is an illustration of the calculation of standard errors and confidence intervals when a difference between two sample estimates is obtained. For example, suppose the number of persons in City B age 16 years and over who were in the civilian labor force was 9,314 and the total number of persons 16 years and over was 16,666. Further suppose the population of City B was 25,225. Thus, the estimated percentage of persons 16 years and over who were in the civilian labor force is 55.9 percent. The unadjusted standard error determined using the formula provided at the bottom of table B is 0.86 percentage points. We find that City B had a percent-in-sample of 15.7. The range which includes 15.7 percent-in-sample in table C shows the design factor to be 1.1 for "Employment Status." Thus, the approximate standard error of the percentage (55.9 percent) is $0.86 \times 1.1 = 0.95$ percentage points.

Now suppose that one wished to obtain the standard error of the difference between City A and City B of the percentages of persons who

were 16 years and over and who were in the civilian labor force. The difference in the percentages of interest for the two cities is:

$$62.6 - 55.9 = 6.7 \text{ percent.}$$

Using the results of the previous example:

$$\begin{aligned} SE[M(6.7|M)]_m &= [M(SE[M(62.6|M)]^2/M) + M(SE[M(55.9|M)]^2/M)]^{1/2} = [M(0.94/M) + M(0.95/M)]^{1/2} \\ &= 1.34 \text{ percentage points} \end{aligned}$$

The 90 percent confidence interval for the difference is formed as before:

$$6.70 \pm 1.645[M(1.34/M)]^{1/2} = 6.70 \pm 1.645[M(1.34/M)]^{1/2}$$

or

$$4.50 \text{ to } 8.90$$

One can say with 90 percent confidence that the interval includes the difference that would have been obtained by averaging the results from all possible samples.

For reasonably large samples, ratio estimates are normally distributed, particularly for the census population. Therefore, if we can calculate the standard error of a ratio estimate then we can form a confidence interval around the ratio. Suppose that one wished to obtain the standard error of the ratio of the estimate of persons who were 16 years and over and who were in the civilian labor force in City A to the estimate of persons who were 16 years and over and who were in the civilian labor force in City B. The ratio of the two estimates of interest is:

$$\begin{aligned} 9948/9314 &= 1.07 \\ SE[M(1.07|M)]_m &= \left[\frac{9948}{9314} \left(\frac{1792}{9948} \right)^2 + \frac{1882}{9314} \left(\frac{1.07}{1.07} \right)^2 \right]^{1/2} \\ &= .029 \end{aligned}$$

Using the results above, the 90 percent confidence interval for this ratio would be:

$$1.07 \pm 1.645[M(.029/M)]^{1/2} = 1.07 \pm 1.645[M(.029/M)]^{1/2}$$

or

$$1.02 \text{ to } 1.12$$

ESTIMATION PROCEDURE

The estimates which appear in this publication were obtained from an iterative ratio estimation procedure (iterative proportional fitting) resulting in the assignment of a weight to each sample person or housing unit record. For any given tabulation area, a characteristic total was estimated by summing the weights assigned to the persons or housing units possessing the characteristic in the tabulation area. Estimates of family or household characteristics were based on the weight assigned to the family member designated as householder. Each sample person or housing unit record was assigned exactly one weight to be used to produce estimates of all characteristics. For example, if the weight given to a sample person or housing unit had the value 6, all characteristics of that person or housing unit would be tabulated with the weight of 6. The estimation procedure, however, did assign weights varying from person to person or housing unit to housing unit. The estimation procedure used to assign the weights was performed in geographically defined "weighting areas." Weighting areas generally were formed of contiguous geographic units which agreed closely with census tabulation areas within counties. Weighting areas were required to have a minimum sample of 400 persons. Weighting areas never crossed State or county boundaries. In small counties with a sample count below 400 persons, the minimum required sample condition was relaxed to permit the entire county to become a weighting area.

Within a weighting area, the ratio estimation procedure for persons was performed in four stages. For persons, the first stage applied 17 household-type groups. The second stage used two groups: sampling rate of 1-in-2; sampling rate less than 1-in-2. The third stage used the dichotomy householders/nonhouseholders. The fourth stage applied 180 aggregate age-sex-race-Hispanic origin categories. The stages were as follows:

PERSONS

STAGE I: TYPE OF HOUSEHOLD

Group Persons in Housing Units With a Family With Own Children Under 18

- 1 2 persons in housing unit
- 2 3 persons in housing unit
- 3 4 persons in housing unit
- 4 5 to 7 persons in housing unit
- 5 8 or more persons in housing unit

Persons in Housing Units With a Family Without Own Children Under 18

- 6-10 2 through 8 or more persons in housing unit

Persons in All Other Housing Units

- 11 1 person in housing unit
- 12-16 2 through 8 or more persons in housing unit

Persons in Group Quarters

17 Persons in Group Quarters

STAGE II: SAMPLING RATES

- 1 Sampling rate of 1-in-2
- 2 Sampling rate less than 1-in-2

STAGE III: HOUSEHOLDER/NONHOUSEHOLDER

- 1 Householder
- 2 Nonhouseholder

STAGE IV: AGE/SEX/RACE/HISPANIC ORIGIN

Group	White
	Persons of Hispanic Origin
	Male
1	0 to 4 years
2	5 to 14 years
3	15 to 19 years
4	20 to 24 years
5	25 to 34 years
6	35 to 54 years
7	55 to 64 years
8	65 to 74 years
9	75 years and over
	Female
10-18	Same age categories as groups 1 through 9.
	Persons Not of Hispanic Origin
19-36	Same sex and age categories as groups 1 through 18.
	Black
37-72	Same age/sex/Hispanic origin categories as groups 1 through 36.
	Asian or Pacific Islander
73-108	Same age/sex/Hispanic origin categories as groups 1 through 36.
	American Indian, Eskimo, or Aleut
109-144	Same age/sex/Hispanic origin categories as groups 1 through 36.
	Other Race (includes those races not listed above)
145-180	Same age/sex/Hispanic origin categories as groups 1 through 36.

Within a weighting area, the first step in the estimation procedure was to assign an initial weight to each sample person record. This weight was approximately equal to the inverse of the probability of selecting a person for the census sample.

The next step in the estimation procedure, prior to iterative

proportional fitting, was to combine categories in each of the four estimation stages, when needed to increase the reliability of the ratio estimation procedure. For each stage, any group that did not meet certain criteria for the unweighted sample count or for the ratio of the 100-percent to the initially weighted sample count, was combined, or collapsed, with another group in the same stage according to a specified collapsing pattern. At the fourth stage, an additional criterion concerning the number of complete count persons in each race/Hispanic origin category was applied.

As the final step, the initial weights underwent four stages of ratio adjustment applying the grouping procedures described above. At the first stage, the ratio of the complete census count to the sum of the initial weights for each sample person was computed for each stage I group. The initial weight assigned to each person in a group was then multiplied by the stage I group ratio to produce an adjusted weight.

In stage II, the stage I adjusted weights were again adjusted by the ratio of the complete census count to the sum of the stage I weights for sample persons in each stage II group. Next, at stage III, the stage II weights were adjusted by the ratio of the complete census count to the sum of the stage II weights for sample persons in each stage III group. Finally, at stage IV, the stage III weights were adjusted by the ratio of the complete census count to the sum of the stage III weights for sample persons in each stage IV group. The four stages of ratio adjustment were performed two times (two iterations) in the order given above. The weights obtained from the second iteration for stage IV were assigned to the sample person records. However, to avoid complications in rounding for tabulated data, only whole number weights were assigned. For example, if the final weight of the persons in a particular group was 7.25 then 1/4 of the sample persons in this group were randomly assigned a weight of 8, while the remaining 3/4 received a weight of 7.

The ratio estimation procedure for housing units was essentially the same as that for persons, except that vacant units were treated differently. The occupied housing unit ratio estimation procedure was done in four stages, and the vacant housing unit ratio estimation procedure was done in a single stage. The first stage for occupied housing units applied 16 household type categories, while the second stage used the two sampling categories described above for persons. The third stage applied three units-in-structure categories; i.e. single units, multi-unit less than 10 and multi-unit 10 or more. The fourth stage could potentially use 200 tenure-race-Hispanic origin-value/rent groups. The stages for ratio estimation for housing units were as follows:

OCCUPIED HOUSING UNITS

STAGE I: TYPE OF HOUSEHOLD

Group Housing Units With a Family With Own Children Under 18

- 1 2 persons in housing unit
- 2 3 persons in housing unit

- 3 4 persons in housing unit
- 4 5 to 7 persons in housing unit
- 5 8 or more persons in housing unit

Housing Units With a Family Without Own Children Under 18
 6-10 2 through 8 or more persons in housingunit

All Other Housing Units
 11 1 person in housing unit
 12-16 2 through 8 or more persons in housing unit

STAGE II: SAMPLING RATE CATEGORY

- 1 Sampling rate of 1-in-2
- 2 Sampling rate less than 1-in-2

STAGE III: UNITS IN STRUCTURE

- 1 Single unit structure
- 2 Multi-unit structure consisting of fewer than 10 individual units
- 3 Multi-unit structure consisting of 10 or more individual units

STAGE IV: TENURE/RACE AND HISPANIC ORIGIN OF HOUSEHOLDER/VALUE OR RENT

Group	Owner
	White Householder
	Householder of Hispanic Origin
	Value
1	Less than \$20,000
2	\$20,000 to \$39,999
3	\$40,000 to \$59,999
4	\$60,000 to \$79,999
5	\$80,000 to \$99,999
6	\$100,000 to \$149,999
7	\$150,000 to \$249,999
8	\$250,000 to \$299,999
9	\$300,000 or more
10	Other1/
	Householder Not of Hispanic Origin
11-20	Same value categories as groups 1 through 10
	Black Householder
21-40	Same Hispanic origin/value categories as groups 1 through 20
	Asian or Pacific Islander Householder
41-60	Same Hispanic origin/value cate gories as groups 1 through 20
	American Indian, Eskimo, or Aleut Householder
61-80	Same Hispanic origin/value categories as groups 1 through 20

Householder of Other Race
81-100 Same Hispanic origin/value categories as groups 1 through 20

Renter

White Householder

Householder of Hispanic origin

Rent

101	Less than \$100
102	\$100 to \$199
103	\$200 to \$299
104	\$300 to \$399
105	\$400 to \$499
106	\$500 to \$599
107	\$600 to \$749
108	\$750 to \$999
109	\$1,000 or more
110	No cash rent

Householder Not of Hispanic Origin

111-120 Same rent categories as groups 101 through 110

Black Householder

121-140 Same Hispanic origin/rent categories as groups 101 through 120

Asian or Pacific Islander Householder

141-160 Same Hispanic origin/rent categories as groups 101 through 120

American Indian, Eskimo, or Aleut Householder

161-180 Same Hispanic origin/rent categories as groups 101 through 120

Householder of Other Race

181-200 Same Hispanic origin/rent categories as groups 101 through 120

Vacant Housing Units

1	Vacant for rent
2	Vacant for sale
3	Other vacant

(1) Value of units in this category results from other factors besides housing value alone, for example, inclusion of more than 10 acres of land, or presence of a business establishment on the premises.

The estimates produced by this procedure realize some of the gains in sampling efficiency that would have resulted if the population had been stratified into the ratio estimation groups before sampling, and if the sampling rate had been applied independently to each group. The net effect is a reduction in both the standard error and the possible bias of most estimated characteristics to levels below what would have resulted from simply using the initial, unadjusted weight. A by-product of this estimation procedure is that the estimates from the sample

will, for the most part, be consistent with the complete count figures for the population and housing unit groups used in the estimation procedure.

Control of Nonsampling Error

As mentioned earlier, both sample and 100-percent data are subject to nonsampling error. This component of error could introduce serious bias into the data, and the total error could increase dramatically over that which would result purely from sampling. While it is impossible to completely eliminate nonsampling error from an operation as large and complex as the decennial census, the Bureau of the Census attempted to control the sources of such error during the collection and processing operations. Described below are the primary sources of nonsampling error and the programs instituted for control of this error. The success of these programs, however, was contingent upon how well the instructions actually were carried out during the census. As part of the 1990 census evaluation program, both the effects of these programs and the amount of error remaining after their application will be evaluated.

Undercoverage--It is possible for some households or persons to be missed entirely by the census. The undercoverage of persons and housing units can introduce biases into the data.

Several coverage improvement programs were implemented during the development of the census address list and census enumeration and processing to minimize undercoverage of the population and housing units. These programs were developed based on experience from the 1980 census and results from the 1990 census testing cycle. In developing and updating the census address list, the Census Bureau used a variety of specialized procedures in different parts of the country.

In the large urban areas, the Census Bureau purchased and geocoded address lists. Concurrent with geocoding, the United States Postal Service (USPS) reviewed and updated this list. After the postal check, census enumerators conducted a dependent canvass and update operation. In the fall of 1989, local officials were given the opportunity to examine block counts of address listings (local review) and identify possible errors. Prior to mailout, the USPS conducted a final review.

In small cities, suburban areas, and selected rural parts of the country, the Census Bureau created the address list through a listing operation. The USPS reviewed and updated this list, and the Census Bureau reconciled USPS corrections and updated through a field operation. In the fall of 1989, local officials participated in reviewing block counts of address listings. Prior to mailout, the USPS conducted a final review.

The Census Bureau (rather than the USPS) conducted a listing operation in the fall of 1989 and delivered census questionnaires in selected rural and seasonal housing areas in March of 1990. In some inner-city public housing developments, whose addresses had been obtained via the purchased address list noted above, census

questionnaires were also delivered by Census Bureau enumerators.

Coverage improvement programs continued during and after mailout. A recheck of units initially classified as vacant or nonexistent improved further the coverage of persons and housing units. All local officials were given the opportunity to participate in a post-census local review, and census enumerators conducted an additional recanvass. In addition, efforts were made to improve the coverage of unique population groups, such as the homeless and parolees/probationers. Computer and clerical edits and telephone and personal visit followup also contributed to improved coverage.

More extensive discussion of the programs implemented to improve coverage will be published by the Census Bureau when the evaluation of the coverage improvement program is completed.

Respondent and Enumerator Error--The person answering the questionnaire or responding to the questions posed by an enumerator could serve as a source of error, although the questions were phrased as clearly as possible based on precensus tests, and detailed instructions for completing the questionnaire were provided to each household. In addition, respondents' answers were edited for completeness and consistency, and problems were followed up as necessary.

The enumerator may misinterpret or otherwise incorrectly record information given by a respondent; may fail to collect some of the information for a person or household; or may collect data for households that were not designated as part of the sample. To control these problems, the work of enumerators was monitored carefully. Field staff were prepared for their tasks by using standardized training packages that included hands-on experience in using census materials. A sample of the households interviewed by enumerators for nonresponse were reinterviewed to control for the possibility of data for fabricated persons being submitted by enumerators. Also, the estimation procedure was designed to control for biases that would result from the collection of data from households not designated for the sample.

Processing Error--The many phases involved in processing the census data represent potential sources for the introduction of nonsampling error. The processing of the census questionnaires includes the field editing, followup, and transmittal of completed questionnaires; the manual coding of write-in responses; and the electronic data processing. The various field, coding and computer operations undergo a number of quality control checks to insure their accurate application.

Nonresponse--Nonresponse to particular questions on the census questionnaire allows for the introduction of bias into the data, since the characteristics of the nonrespondents have not been observed and may differ from those reported by respondents. As a result, any imputation procedure using respondent data may not completely reflect this difference either at the elemental level (individual person or housing unit) or on the average. Some protection against the

introduction of large biases is afforded by minimizing nonresponse. In the census, nonresponse was reduced substantially during the field operations by the various edit and followup operations aimed at obtaining a response for every question. Characteristics for the nonresponses remaining after this operation were imputed by the computer by using reported data for a person or housing unit with similar characteristics.

EDITING OF UNACCEPTABLE DATA

The objective of the processing operation is to produce a set of data that describes the population as accurately and clearly as possible. To meet this objective, questionnaires were edited during field data collection operations for consistency, completeness, and acceptability. Questionnaires also were reviewed by census clerks for omissions, certain specific inconsistencies, and population coverage. For example, write-in entries such as "Don't know" or "NA" were considered unacceptable. For some district offices, the initial edit was automated; however, for the majority of the district offices, it was performed by clerks. As a result of this operation, a telephone or personal visit followup was made to obtain missing information. Potential coverage errors were included in the followup, as well as a sample of questionnaires with omissions and/or inconsistencies.

Subsequent to field operations, remaining incomplete or inconsistent information on the questionnaires was assigned using imputation procedures during the final automated edit of the collected data. Imputations, or computer assignments of acceptable codes in place of unacceptable entries or blanks, are needed most often when an entry for a given item is lacking or when the information reported for a person or housing unit on that item is inconsistent with other information for that same person or housing unit. As in previous censuses, the general procedure for changing unacceptable entries was to assign an entry for a person or housing unit that was consistent with entries for persons or housing units with similar characteristics. The assignment of acceptable codes in place of blanks or unacceptable entries enhances the usefulness of the data.

Another way in which corrections were made during the computer editing process was through substitution; that is, the assignment of a full set of characteristics for a person or housing unit. When there was an indication that a housing unit was occupied but the questionnaire contained no information for the people within the household or the occupants were not listed on the questionnaire, a previously accepted household was selected as a substitute, and the full set of characteristics for the substitute was duplicated. The assignment of the full set of housing characteristics occurred when there was no housing information available. If the housing unit was determined to be occupied, the housing characteristics were assigned from a previously processed occupied unit. If the housing unit was vacant, the housing characteristics were assigned from a previously processed vacant unit.

Table A. Unadjusted Standard Error for Estimated

Totals

(Based on a 1-in-6 simple random sample)

Estimated Total	Size of publication area							
	500	1,000	2,500	5,000	10,000	25,000	50,000	100,000
50	16	16	16	16	16	16	16	16
100	20	21	22	22	22	22	22	22
250	25	30	35	35	35	35	35	35
500	-	35	45	45	50	50	50	50
1,000	-	-	55	65	65	70	70	70
2,500	-	-	-	80	95	110	110	110
5,000	-	-	-	-	110	140	150	150
10,000	-	-	-	-	-	170	200	210
15,000	-	-	-	-	-	170	230	250
25,000	-	-	-	-	-	-	250	310
75,000	-	-	-	-	-	-	-	310
100,000	-	-	-	-	-	-	-	-
250,000	-	-	-	-	-	-	-	-
500,000	-	-	-	-	-	-	-	-
1,000,000	-	-	-	-	-	-	-	-
5,000,000	-	-	-	-	-	-	-	-
10,000,000	-	-	-	-	-	-	-	-

Estimated Total						
	250,000	500,000	1,000,000	5,000,000	10,000,000	25,000,000
50	16	16	16	16	16	16
100	22	22	22	22	22	22
250	35	35	35	35	35	35
500	50	50	50	50	50	50
1,000	70	70	70	70	70	70
2,500	110	110	110	110	110	110
5,000	160	160	160	160	160	160
10,000	220	220	220	220	220	220
15,000	270	270	270	270	270	270
25,000	340	350	350	350	350	350
75,000	510	570	590	610	610	610
100,000	550	630	670	700	700	710
250,000	-	790	970	1 090	1 100	1 100
500,000	-	-	1 120	1 500	1 540	1 570
1,000,000	-	-	-	2 000	2 120	2 190
5,000,000	-	-	-	-	3 540	4 470
10,000,000	-	-	-	-	-	5 480

(1) For estimated totals larger than 10,000,000, the standard error is somewhat larger than the table values. The formula given below should be used to calculate the standard error.

$$SE|M(\frac{Y}{M})| = \frac{Y}{M} \sqrt{\frac{1}{m} - \frac{Y}{M}}$$

m = Size of area

$$\frac{Y}{M} = \frac{\text{Estimate of characteristic}}{\text{Total}}$$

(2) The total count of persons in the area if the estimated total is a person characteristic, or the total count of housing units in the area if the estimated total is a housing unit characteristic.

Table B. Unadjusted Standard Error in Percentage Points for Estimated Percentage

(Based on a 1-in-6 simple random sample)

Base of percentage

Estimated Percentage	500	750	1,000	1,500	2,500	5,000	7,500	10,000
2 or 98	1.4	1.1	1.0	0.8	0.6	0.4	0.4	0.3
5 or 95	2.2	1.8	1.5	1.3	1.0	0.7	0.6	0.5
10 or 90	3.0	2.4	2.1	1.7	1.3	0.9	0.8	0.7
15 or 85	3.6	2.9	2.5	2.1	1.6	1.1	0.9	0.8
20 or 80	4.0	3.3	2.8	2.3	1.8	1.3	1.0	0.9
25 or 75	4.3	3.5	3.1	2.5	1.9	1.4	1.1	1.0
30 or 70	4.6	3.7	3.2	2.6	2.0	1.4	1.2	1.0
35 or 65	4.8	3.9	3.4	2.8	2.1	1.5	1.2	1.1
50	5.0	4.1	3.5	2.9	2.2	1.6	1.3	1.1

Estimated Percentage	25,000	50,000	100,000	250,000	500,000
2 or 98	0.2	0.1	0.1	0.1	0.1
5 or 95	0.3	0.2	0.2	0.1	0.1
10 or 90	0.4	0.3	0.2	0.1	0.1
15 or 85	0.5	0.4	0.3	0.2	0.1
20 or 80	0.6	0.4	0.3	0.2	0.1
25 or 75	0.6	0.4	0.3	0.2	0.1
30 or 70	0.6	0.5	0.3	0.2	0.1
35 or 65	0.7	0.5	0.3	0.2	0.2
50	0.7	0.5	0.4	0.2	0.2

(1) For a percentage and/or base of percentage not shown in the table, the formula given below may be used to calculate the standard error. This table should only be used for proportions, that is, where the numerator is a subset of the denominator.

$$SE = \frac{M(100 - m)}{19.5 \sqrt{B \cdot m}}$$

Base of estimated percentage

$$m = \frac{Estimated\ percentage}{M}$$

Census User Note on Sample Estimates for Population and Housing

Census STF3A USER NOTE 2: Clarification of Differences Between 100-Percent Counts and Sample Estimates--Estimated population and housing unit totals based on tabulations from only the sample questionnaires (sample tabulations) may differ from the official counts as tabulated from every census questionnaire (100-percent tabulations). Such differences result, in part, because the sample tabulations are based on information from a sample of households rather than from all households (sampling error). Differences also can occur because the interview situation (length of questionnaire, effect of the interviewer, and so forth) and the processing rules differ somewhat between the 100-percent and sample tabulations. These types of differences are reflected in what is called nonsampling error. (For a more detailed description of nonsampling error, see Appendix C, "Accuracy of the Data," in the technical documentation for Summary Tape File 3.)

The 100-percent data are the official counts and should be used as the source of information on items collected on the 100-percent questionnaire, such as race, Hispanic origin, age, and number of rooms in housing. This is especially appropriate when the primary focus is on counts of the population or housing units for small areas such as census tracts, block groups, and for American Indian and Alaska Native areas. For estimates of counts of persons and housing units by characteristics asked only on a sample basis (such as education, labor force status, income, and source of water), the sample estimates should be used within the context of the error associated with them.

Many users are interested in tabulations of items collected on the sample cross-classified by items collected on a 100-percent basis such as age, race, gender, Hispanic origin, and housing units by tenure. Given the way the weights were applied during sample tabulations, generally there is exact agreement between sample estimates and 100-percent counts for total population and total housing units for most geographic areas. At the state and higher levels, we also would expect that sample estimates and 100-percent counts for population by race, age, gender, and Hispanic origin and for housing units by tenure, number of rooms, and so on, would be reasonably similar and, in some cases, the same. At smaller geographic levels, including census tract, there is still general agreement between 100-percent counts and sample estimates of total population or housing units. At smaller geographic levels, however, there will be expected differences between sample estimates and 100-percent counts for population by race, age, gender, and Hispanic origin and for housing units by tenure, number of rooms, and so on. In these cases, users may want to consider using derived measures (mean, median, and so on) or percent distributions. Whether using absolute numbers or derived measures for small population groups and for a small number of housing units in small geographic areas, users should be cautioned that the sampling error associated with these data may be large.

Even though the differences between sample estimates and 100-percent counts for these categories are generally small, the differences for the American Indian as well as the Hispanic origin populations are relatively larger than for other groups. The following provides some explanation for these differences.

State-level sample estimates of the number of American Indians are generally higher than the corresponding 100-percent counts. It appears the differences are primarily the result of proportionately higher reporting of "Cherokee" tribe on sample questionnaires. This phenomenon occurs primarily in off-reservation areas. The reasons for the greater reporting of Cherokee on sample forms are not fully known at this time. The Census Bureau will do research to provide more information on this phenomenon.

For the Hispanic origin population, sample estimates at the state level are generally lower than the corresponding 100-percent counts. The majority of difference is caused by the 100-percent and sample processing of the Hispanic question on the sample questionnaire when the respondent did not mark any

response category. When processing the sample, we used written entries in race or Hispanic origin as well as responses to questions only asked on the sample, such as ancestry and place of birth. These procedures led to a lower proportion of persons being assigned as Hispanic in sample processing than were assigned during 100-percent processing. The Census Bureau will evaluate the effectiveness of the 100-percent and sample procedures.

As we have done in previous censuses, we will evaluate the quality of the data and make this information available to data users. In the meanwhile, both 100-percent and sample data serve very important purposes and, therefore, should be used within the limitations of the sampling and nonsampling errors.

Census Latitude & Longitude Collection Codes

The databases for which latitude and longitude collection method, accuracy and description have been documented are: Air Facilities, Hazardous Waste Facilities, Superfund Sites, Toxic Release Inventory Facilities, and Wasterwater Dischargers. If the field LL_METHOD is blank, documentation has not been obtained for that facility.

The values in LL_METHOD are:

A1 Address Matching - House Number: derived from a point corresponding to a house or building number along a street segment.

A2 Address Matching - Block Face: derived from a calculated midpoint of one side of a street segment with regard to odd or even addresses.

A3 Address Matching - Street Centerline: derived from a calculated midpoint and centerpoint of a street segment.

A4 Address Matching - Nearest Intersection: derived from the intersection closest to a house or building number.

A5 Address Matching - Primary Name: derived from the primary name of a township or city.

A6 Address Matching - Digitized: derived from hands-on use of computer-based mapping tools.

AO Address Matching - Other: derived through the use of non-specific matching techniques.

C1 Census Block - 1990 - Centroid: derived from the calculated centerpoint of a 1990 Census Block as defined by the U.S. Bureau of the Census.

C2 Census Block/Group - 1990 - Centroid: derived from the calculated centerpoint of a 1990 Census Block/Group as defined by the U.S. Bureau of the Census.

C3 Census Block Tract - 1990 - Centroid: derived from the calculated centerpoint of a 1990 Census Tract as defined by the U.S. Bureau of the Census.

CO Census - Other: derived from other Census-defined areas, such as Metropolitan Statistical Areas (MSAs).

G0 GPS-Unspecified: derived through the use of an unspecified GPS device.

G1 Global Positioning System (GPS) Carrier Phase Static Relative Positioning Technique: derived through the use of a GPS device employing Carrier Static Relative Positioning Technique.

G2 GPS Carrier Phase Kinematic Relative Positioning Technique: derived through the use of a GPS device employing Phase Kinematic Relative Positioning Technique.

G3 GPS Code Measurements (Pseudo Range) Differentially Corrected: derived through the use of a GPS device where measurements have been corrected for error based on the existence of known base stations relative to the study area.

- G4 GPS Code Measurements (Pseudo Range) Precise Positioning Service: derived through the use of a GPS device employing real-time precise positioning techniques.
- G5 GPS Code Measurements (Pseudo Range) Standard Positioning Service SA OFF: derived through the use of a GPS device when the Department of Defense Selective Availability was turned off.
- G6 GPS Code Measurements (Pseudo Range) Standard Positioning Service SA ON: derived through the use of a GPS device when the Department of Defense Selective Availability was turned on.
- G7 GPS Code Measurements (Pseudo Range) Standard Positioning Service Corrected using Canadian Active Control System: derived through the use of a GPS device employing the Canadian Active Control System.
- I1 Interpolation - Map: derived from a paper or other non-digital map.
- I2 Interpolation - Photo: derived from an aerial photograph.
- I3 Interpolation - Satellite: derived from a satellite image.
- I4 Interpolation - Digital map source (TIGER): derived from a digital map, mapping software or mapping tool.
- I5 Interpolation - SPOT: derived from a SPOT image.
- I6 Interpolation - MSS (Multi-spectral Scanner): derived from a MSS image.
- I7 Interpolation - TM (Thematic Mapper): derived from a thematic mapper.
- L1 Loran C: derived from the use of a Loran-C positioning device.
- P1 Public Land Survey-Section: a coordinate pair corresponding to a point from a public land survey.
- P2 Public Land Survey-Quarter Section: a coordinate pair corresponding to a point from a public land survey.
- P3 Public Land Survey-Eighth Section: a coordinate pair corresponding to a point from a public land survey.
- P4 Public Land Survey-Sixteenth Section: a coordinate pair corresponding to a point from a public land survey.
- P5 Public Land Survey-Footing: a coordinate pair corresponding to a point from a public land survey.
- S1 Classical Surveying Techniques: derived from traditional surveying techniques associated with construction activities.
- Z1 ZIP Code-Centroid: derived from the calculated center of a U.S. postal zip code.
- Z2 ZIP+2 Code-Centroid: derived from an averaging of multiple street segments. Approximately the size of a Census Block Group.

Z4 ZIP+4 Code-Centroid: derived from a calculated midpoint of one side of a street segment with regard to odd or even house or building numbers.

The values in the LL_DESCRIP field are:

AB Administrative Building: a building, structure, or portion thereof that houses the administrative functions of a facility as opposed to production or manufacturing activities.

AE Atmospheric Emissions Treatment Unit: equipment installed for the express purpose of treating chemical emissions prior to their release into the atmosphere.

AM Air Monitoring Station: equipment installed at a predetermined location for the automatic, manual, or periodic collection of environmental air samples.

AS Air Release Stack: a free-standing vertical structure constructed for the conveyance and release of chemical emissions into the air.

AV Air Release Vent: a horizontal structure constructed for the release of chemical emissions into the air, typically from the side or roof of a building.

CE Center of Facility: a representative centerpoint within the boundary of a facility.

FC Facility Centroid: the calculated center of a contiguous facility.

IP Intake Pipe: a pipe or intake opening constructed for the collection and conveyance of water.

LC Loading Area Centroid: the calculated center of a portion of a facility associated with loading activities.

LF Loading Facility: the portion of a facility associated with loading and/or transshipment activities.

LW Liquid Waste Treatment Unit: Equipment installed for the express purpose of treating chemical emissions prior to their release to water, publicly owned treatment works (POTW) or off-site transfer.

NE NE Corner of Land Parcel: the northeast most corner or boundary of a land parcel.

NW NW Corner of Land Parcel: the northwest most corner or boundary of a land parcel.

OT Other: see descriptive comment field.

PC Process Unit Area Centroid: the calculated center of a portion of a facility associated with processing and/or manufacturing activities,

PF Plant Entrance (Freight): the entrance to a facility associated with transshipment activities.

PG Plant Entrance (General): the front gate or general entrance of a facility.

PP Plant Entrance (Personnel): the entrance to a facility associated with employees.

PU Process Unit: the portion of a facility associated with processing and/or manufacturing activities.

SD Solid Waste Treatment/Disposal Unit: the portion of a facility associated with the treatment and/or disposal of solid waste.

SE SE Corner of Land Parcel: the southeast most corner or boundary of a land parcel.

SP Lagoon or Settling Pond: the portion of a facility designed to accommodate sedimentation or settling of chemical byproducts necessitated by the manufacture, production, or use of chemicals.

SS Solid Waste Storage Area: the portion of a facility associated with the storage of solid waste.

ST Storage Tank: a receptacle or chamber used for storing bulk fuels or chemicals.

SW SW Corner of Land Parcel: the southwest most corner or boundary of a land parcel.

WA Wellhead Protection Area: an area at the earth's surface buffering a wellhead.

WL Well: a shaft drilled in the earth for purposes such as obtaining subsurface drinking water, or collecting groundwater monitoring samples.

WM Water Monitoring Station: a location or study area for the automatic, manual, or periodic collection of water samples.

WR Pipe Release to Water: the point at which a pipe constructed for the conveyance and release of water-borne chemical emissions reaches a water body.

LandView™ III Help
Nuclear Sites

The Nuclear Sites database in LandView comes from the Nuclear Regulatory Commission. It contains information on the following types of sites:

Nuclear Power Plants

Fuel Cycle Licensees with Emergency Plans

Material Licensees with Emergency Plans

Site Decommissioning Management Plan Sites with Planned Environmental Justice Reviews

Uranium Mill Sites with Planned Environmental Justice Reviews

High Level Waste Facilities

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for file NRCSITES.DBF are as follows:

NAME C 29
Site or Facility Name

TYPE C 20
Type of Facility

STATUS C 22
Operating Status of Facility (Powerplants only)

CITY C 15
Facility City

STATE C 2
Facility State

LATDEG C 3
Latitude Degrees

LATMIN C 2

Latitude Minutes

LATSEC C 2

Latitude Seconds

LONDEG C 3

Longitude Degrees

LONMIN C 2

Longitude Minutes

LONSEC C 2

Longitude Seconds

LATITUDE N 12 6

Latitude in decimal degrees

LONGITUDE N 12 6

Longitude in decimal degrees

LandView™ III Help
Generalized Boundaries

The boundary files for the mapping of states, counties, tracts, block groups, MCDs, MSAs, Indian Lands, Alaska Native Lands, and Congressional Districts are generalized, which means that the number of lines making up the perimeter of those polygons are reduced, and the polygon shapes are simplified. The purpose of generalizing the boundaries is to reduce the size of the map files, and to speed their display. The "Places" layer is not generalized. The "Census Block Grps-generalized" layer is generalized, while the "Census Block Groups" layer is not. The latter resides on the individual county maps, and are not included on the nationwide LandView CD (disk 11), but only on the regional CDs (disks 1-10). The "Census Block Grps-generalized" layer is on all CDs.

Details of the generalization process are as follows:

Original boundary coordinates and geocodes were extracted from the Census Bureau's TIGER data base -- a system of internal files equivalent to the publicly available TIGER/Line files. Coordinates and geocodes were imported into an ArcInfo environment where generalization processes were applied to reduce boundary complexity and the size of the files. The generalization process included reduction of coordinate pairs, elimination of small polygons for discontinuous entities, and elimination of small Census tract/BNAs and Block Groups with zero population. Different degrees of coordinate reduction or thinning were used for different boundary types. State, county, MCD and MSA boundaries were aggressively thinned, although lines coincident amongst these separate boundary networks retain a precise nesting quality. The Census tract/BNA, Block Group, Indian Lands, and Alaska Native Lands boundaries were moderately thinned, while CD boundaries were only minimally thinned. Geographic relationships amongst boundary types can not be inferred from boundary location, because boundary networks were thinned independently of one another (except for the previously mentioned State, county, MCD and MSA boundaries). After generalization, all boundary networks were clipped against a national coastline. This coastline was also derived from the TIGER data base and then generalized within the ArcInfo environment.

LandView™ III Help
Metadata for Toxic Release Inventory

Identification_Information:

Citation:

Citation_Information:

Originator: Office of Prevention, Pesticides, and
Toxic Substances, USEPA

Publication_Date: 1994

Title: Toxic Chemical Release Inventory (TRI) of Facilities
in 1987 to 1993 by States and Territories Including
American Samoa, Puerto Rico, and the Virgin Islands

Description:

Abstract:

includes: TRI contains data on annual estimated releases of over 300 toxic chemicals to air, water, and land by the manufacturing industry. Industrial facilities provide the information, which
source the location of the facility where chemicals are manufactured, processed, or otherwise used; amounts of chemicals stored on-site; estimated quantities of chemicals released; on-site
reduction and recycling practices; and estimated amounts of chemicals transferred to treatment, recycling, or waste facilities.

into The TRI data for chemical releases to land are limited to releases within the boundary of a facility. Releases to land include: landfills; land treatment/application farming; and surface impoundments, such as topographic depressions, man-made excavations, or diked areas. Air releases are identified as either point source releases or as non-point (i.e. fugitive) releases, such as those occurring from vents, ducts, pipes, or any confined air stream. Surface water releases included discharges to rivers, lakes, streams, and other bodies of water. In addition, the database covers releases to underground injection wells (where chemicals are injected
the groundwater) and off-site transfers of chemicals to either publicly owned treatment works (POTWs) or any other disposal, treatment, storage, or recycling facility.

Purpose:

on The United States Toxics release Inventory (TRI) is mandated by Section 313 of the Emergency Planning and community Right-to-Know Act (EPCRA) of 1986. The law is based
the premise that citizens have a right to know about potentially harmful chemicals in their communities. It has two main purposes: to provide planning for response to chemical
accidents; and to provide the public and the government with information about possible chemical
hazards.

Supplemental_Information:

Procedures:

The TRI data are extracted from TRIS on a yearly basis, the ADABASE implementation of TRI submitted data. It provides a "snapshot" or static representation of the TRI data in TRIS at the time of the extract. TRIPQUIC then processes the data and generates delimited ASCII files which are used to create the ARC/INFO coverages.

Reviews_Applied:

The QA process consists of first ensuring no error in reporting or data entry of the facility coordinates. If possible any errors found here are corrected before continuing with the QA process. The next step involves checking coordinates against a 1 - km buffer of the ZIP code region for the reporting facility. The coordinates of the facility should fall within the buffered zip code boundary. General QA is also performed on the data. This consists of spot checking fields and the data they contain. A visual check is also performed for placement of each facility.

AGENCY SUPPLEMENTAL INFORMATION:

TRI data (without additional geographic coordinates) is available online for interactive search and retrieval from the following sources:

TOXNET (requires user account) National Library of Medicine
(NLM) Specialized Information Services
8600 Rockville Pike
Bethesda, MD 20894
Phone: (301) 496-6531

Right-to-Know Computer Network (RTK-NET)
1731 Connecticut Ave. NW
Washington DC 20009-1146
Phone: (202) 797-7200
RTK-NET System: (202) 234-8570
Parameters: 8 data bits, 1 stop bit, no parity.
Login as 'public.'

Additionally, TRI data is available on floppy diskette (high-density 5.25 and 3.5 inch diskettes, dBase and Lotus formats), CD-ROM (1987-1992 reporting years), and magnetic tapes from the following sources:

National Technical Information Service (NTIS)
5285 Port Royal Road
Springfield, VA 22161
Phone: (703) 487-4650
FAX: (703) 321-8547

U.S. Government Printing Office (GPO)
Superintendent of Documents

P.O. Box 371954
Pittsburgh, PA 15250-7954
Phone: (202) 783-3238
FAX: (202) 512-2250

Time_Period_of_Content:

Time_Period_Information:

Range_of_Dates/Times:

Beginning_Date: 1987

Ending_Date: 1993

Currentness_Reference: publication date

Status:

Progress: complete

Maintenance_and_Update_Frequency: As needed

Spatial_Domain:

Bounding_Coordinates:

West_Bounding_Coordinate: -171.0000

East_Bounding_Coordinate: 145.0000

North_Bounding_Coordinate: 71.5000

South_Bounding_Coordinate: -15.0000

Access_Constraints: none

Use_Constraints:

None. Acknowledgement of the U.S. Environmental Protection Agency would be appreciated.

Point_of_Contact:

Contact_Information:

Contact_Organization_Primary:

Contact_Organization: Toxic Release Inventory User Support (TRI-USEPA)

Contact_Address:

Address_Type: mailing address

Address:

TRI User Support (7407)
U.S. Environmental Protection Agency
401 M Street SW
Washington, DC 20460

Contact_Voice_Telephone: (202) 260-1531

Contact_Facsimile_Telephone: (202) 260-4659

Contact_Electronic_Mail_Address: hall.loren@epamail.epa.gov

Hours_of_Service: 8:30AM to 7:30PM EST

Cross_Reference:

Citation:

Citation_Information:

Originator: American Management Systems

Publication_Date: 1991

Title:

TRI Data Quality Assurance for Geographic Information Systems

Publication_Information:

Publication_Place: Arlington, Virginia

Publisher: American Management Systems

Citation_Information:

Originator: Geographic Data Technology, Inc.

Publication_Date: 1990

Title:

1990 Five Digit ZIP Code Inventory File Documentation

Publication_Information:

Publication_Place: Lyme, NH

Publisher: Geographic Data Technology, Inc.

Citation_Information:

Originator: U.S. Environmental Protection Agency

Publication_Date: 1991

Title:

Inventory of Exposure-Related Data Systems Sponsored by Federal Agencies

Publication_Information:

Publication_Place: Washington, D.C.

Publisher: U.S. Environmental Protection Agency and The Center for Disease Registry

Citation_Information:

Originator: Office of Toxic Substances, USEPA

Publication_Date: 1991

Title:

TRIPQUIC - The Toxic Release Inventory Quick Analysis Tool Kit Users Guide
3.0

Publication_Information:

Publication_Place: Washington, D.C.

Publisher: U.S. Environmental Protection Agency

Citation_Information:

Originator: Office of Pollution, Prevention, and Toxics, USEPA

Publication_Date: March 1995

Title:

1993 Toxics Release Inventory, Public Data Release Document
#EPA745-R-95-010

Publication_Information:

Publication_Place: Washington, D.C.

Publisher: U.S. Environmental Protection Agency

Citation_Information:

Originator: Office of Information Resources Management, USEPA

Publication_Date: February 1991

Title:

Locational Data Policy Guidance

Publication_Information:

Publication_Place: Washington, D.C.

Publisher: U.S. Environmental Protection Agency

Online_Linkage: <URL:http://www.epa.gov/docs/irm_polman/chaptr13.txt.html>

Citation_Information:

Originator: Office of Information Resources Management, USEPA

Publication_Date: 1995

Title:

Method Accuracy Description (MAD), version 6.1 Information Coding Standards
for the U.S. Environmental Protection Agency's Locational Data Policy (LDP)

Publication_Information:

Publication_Place: Washington, D.C.

Publisher: U.S. Environmental Protection Agency

Online_Linkage: <URL:<http://www.epa.gov/docs/ngispr/mad.html>>

Citation_Information:

Originator: Office of Pollution, Prevention, and Toxics, USEPA

Publication_Date: 1992

Title:

Update to TRI Location Data Quality Assurance and Release Notes for 1987-1993
GIS Coverages

Publication_Information:

Publication_Place: Washington, D.C.

Publisher: U.S. Environmental Protection Agency

Other_Citation_Details:

AVAILABILITY: The report, "Updated TRI Location Data Quality Assurance and
Release Notes for 1987-1993 GIS Coverages", which describes GIS export file
coverages and includes an explanation of the preferred geographic coordinate
selection method, is available from:

Environmental Assistance Division GIS Support (7408)

U.S. Environmental Protection Agency

401 M Street SW

Washington, DC 20460

Phone: (202)260-3931

FAX: (202)260-1764

Hard copies of both 1993 Toxic Release Inventory Public Release books (Report
and State Fact Sheets) are available from:

Toxic Release Inventory User Support (TRI-US)(7407)

U.S. Environmental Protection Agency

401 M Street SW

Washington, DC 20460

Phone: (202) 260-1531

FAX: (202) 260-4659

(See Agency Supplemental Information)

TRI Reports (hard copy only) are also available from:
Emergency Planning and Community Right-to-Know (EPCRA) Information Hotline
Phone: (800) 535-0202
FAX: (703) 412-3333
(document orders only)
hours: 8:30AM - 7:30PM EST

LandView™ III Help

Brownfields Pilots

Brownfields Pilots

The Brownfields data in LandView III are extracted from the Brownfields Management System (BMS). BMS is a prototype management tool used by the OSWER Outreach/Special Projects staff at EPA to manage the Brownfields program. This is a preliminary set of information (current as of July 1997) showing pilot boundaries for 115 Brownfields pilots. Since fiscal year 1995, EPA has provided funding to 115 States, cities, towns, counties, and Tribes for Brownfields Assessment pilots. The purpose of this funding to bring together community groups, investors, lenders, developers, and other affected parties to address the issues of cleaning up sites contaminated with hazardous substances and returning them to appropriate, productive use.

The database structure, including field names, data types, field lengths, number of decimal places, and field descriptions for the BRNFLDP.DBF file is as follows:

PILOT_ID	C	8	Unique number used to distinguish among multiple pilots.
PILOT_NAME	C	40	Pilot name.
RECIP_NAME	C	40	Name of the recipient of the pilot grant.
CITY	C	15	Name of the city within which the pilot is located (note: will be blank if the pilot area boundary extends beyond the boundaries of a single city).
COUNTY	C	30	Name of the county within which the pilot is located (note: will be blank if the pilot area boundary extends beyond the boundaries of a single county).
STATE	C	2	Standard abbreviation for the state within which the pilot is located (note: will be blank if the pilot area boundary extends beyond the boundaries of a single state).
AWARD_AMT	C	9	Dollar amount of the pilot grant.
AWARD_DT	C	8	Date on which the grant was announced (in format MM/DD/YY).
GEOG_AREA	C	150	Textual description of the geographic area or areas (city, county, multiple cities or multiple counties, state, or other area) encompassed by the pilot boundary
LL_METHOD	C	2	Latitude and longitude collection method for the pilot boundary.
LL_ACCURAC	C	7	

Accuracy associated with the latitude and longitude collection method for the pilot boundary

LL_DESCRIP C 2

Description of the feature reference by the latitude and longitude coordinates of the pilot boundary. For BRNFLDP.DBF, the value is always "OT" ("OTHER"), since the boundary represents a particular area (as described in the GEOG_AREA field) rather than a particular collection point.

LATITUDE C 10

Latitude in decimal degrees. With LONGITUDE, defines a single point at or near the center of the pilot area. (Note: LL_METHOD, LL_ACCUR, and LL_DESCRIP pertain to the pilot area, not to LATITUDE and LONGITUDE. However, LATITUDE and LONGITUDE were derived arithmetically from the pilot area.)

LONGITUDE C 11

Longitude in decimal degrees. With LATITUDE, defines a single point at or near the center of the pilot area. (Note: LL_METHOD, LL_ACCUR, and LL_DESCRIP pertain to the pilot area, not to LATITUDE and LONGITUDE. However, LATITUDE and LONGITUDE were derived arithmetically from the pilot area.)

Adding New Data and Maps to LandView

The databases in LandView III are in the xBase format (dBase, Foxpro, etc.), with a .DBF extension. Any file in this format may be viewed from within LandView by choosing the [Open](#) option of the File menu. Once the file has been opened, you can choose [Find Record](#), and [Query](#) from the Records menu, to search for particular records and to generate subsets of records.

You may also create a new xbase file using the [New](#) option from the File menu. Refer to the Help topics on the [File](#) and [Records](#) menus for more information.

To have a file installed in the "Other Files" menu, see [Adding your own files to the "Other Files" menu](#).

If your database has latitude and longitude coordinate information, you may create MARPLOT map objects that correspond to the records in your database. See the Help topics under the [Map Menu](#) for more information.

Maps in ARC INFO may be imported into MARPLOT if they are first converted to the UNGENERATE format (using the ARC INFO UNGENERATE command). See the MARPLOT technical documentation (file TECHDOC.PDF in the document directory of the LandView III CD-ROM) for information on the various methods of importing maps to MARPLOT.